${\tt MSSVAVLTQESFAEHRSGLVPQQIKVATLNSEEESDPPTYKDAFPPLPEKAACLESAQEPAGAWGNKIRPIKASV}$ ITQVFHVPLEERKYKDMNQFGEGEQAKICLEIMQRTGAHLELSLAKDQGLSIMVSGKLDAVMKARKDIVARLQTQ ASATVAIPKEHHRFVIGKNGEKLQDLELKTATKIQIPRPDDPSNQIKITGTKEGIEKARHEVLLISAEQDKRAVE ${\tt RLEVEKAFHPFIAGPYNRLVGEIMQETGTRINIPPPSVNRTEIVFTGEKEQLAQAVARIKKIYEEKKKKTTTIAV}$ EVKKSQHKYVIGPKGNSLQEILERTGVSVEIPPSDSISETVILRGEPEKLGQALTEVYAKANSFTVSSVAAPSWL $\tt HRFIIGKKGQNLAKITQQMPKVHIEFTEGEDKITLEGPTEDVNVAQEQIEGMVKDLINRMDYVEINIDHKFHRHL$ $\tt IGKSGANINRIKDQYKVSVRIPPDSEKSNLIRIEGDPQGVQQAKRELLELASRMENERTKDLIIEQRFHRTIIGQ$ ${\tt KGERIREIRDKFPEVIINFPDPAQKSDIVQLRGPKNEVEKCTKYMQKMVADLVENSYSISVPIFKQFHKNIIGKG}$ GANIKKIREESNTKIDLPAENSNSETIIITGKRANCEAARSRILSIQKDLANIAEVEVSIPAKLHNSLIGTKGRL IRSIMEECGGVHIHFPVEGSGSDTVVIRGPSSDVEKAKKQLLHLAEEKQTKSFTVDIRAKPEYHKFLIGKGGGKI ${\tt RKVRDSTGARVIFPAAEDKDQDLITIIGKEDAVREAQKELEALIQNLDNVVEDSMLVDPKHHRHFVIRRGQVLRE}$ ${\tt IAEEYGGVMVSFPRSGTQSDKVTLKGAKDCVEAAKKRIQEIIEDLEAQVTLECAIPQKFHRSVMGPKGSRIQQIT}$ ${\tt RDFSVQIKFPDREENAVHSTEPVVQENGDEAGEGREAKDCDPGSPRRCDIIIISGRKEKCEAAKEALEALVPVTI}$ ${\tt EVEVPFDLHRYVIGQKGSGIRKMMDEFEVNIHVPAPELQSDIIAITGLAANLDRAKAGLLERVKELQAEQEDRAL}$ ${\tt RSFKLSVTVDPKYHPKIIGRKGAVITQIRLEHDVNIQFPDKDDGNQPQDQITITGYEKNTEAARDAILRIVGELE}$ QMVSEDVPLDHRVHARIIGARGKAIRKIMDEFKVDIRFPQSGAPDPNCVTVTGLPENVEEAIDHILNLEEEYLAD VVDSEALQVYMKPPAHEEAKAPSRGFVVRDAPWTASSSEKAPDMSSSEEFPSFGAQVAPKTLPWGPKR

GCACTCCCGCCACCACCTGCCCTCCCGCGACCGCCTCTCTCCTCAGTGGGCACTTGTCTCCTCTAACAAAC GGCCTTCCCCCCACTCCAGTTACCCACCGCAAGGCGAAGATTCTCATTACCTGTTCCACTCTTATAAGCATAAGA ${\tt AAACCGAGCTCATAAGACGAAGCTTCACAAAAG} \underline{\textbf{ATG}} \texttt{TCTAAGCAACAGCCAACTCAGTTTATAAATCCAGAAACA}$ CCTGGCTATGTTGGATTTGCAAACCTCCCCAATCAAGTTCACCGAAAATCAGTGAAAAAAGGTTTTGAGTTCACA CTGATGGTGGTCGGTGAATCAGGTCTAGGAAAATCGACTCTCATAAACAGCCTATTCCTAACTGATCTGTACCCA GAAAGAGTCATACCTGGAGCAGCAGAAAAAATTGAAAGAACTGTCCAGATTGAGGCTTCAACTGTTGAAATTGAA GAGCGAGGGGTCAAGCTACGCCTGACAGTGGTAGATACCCCTGGCTATGGTGACGCTATCAACTGCAGAGATTGT TTTAAGACAATTATCTCCTATATTGATGAGCAATTTGAGAGGTACCTGCATGACGAGAGCGGCTTGAACAGGCGG CACATCATTGATAATAGGGTGCATTGTTGCTTTTACTTTATTTCACCTTTTGGACATGGACTTAAGCCCTTAGAT GTGGCGTTTATGAAGGCAATACACAACAAGGTGAATATTGTGCCTGTCATTGCAAAAGCTGACACTCTCACCCTG AAGGAACGGGAGCGGCTGAAGAAAAGGATTCTGGATGAAATTGAAGAACATAACATCAAAATCTATCACTTACCT GATGCAGAATCAGATGAAGATGAAGATTTTAAAGAGCAGACTAGACTTCTCAAGGCTAGCATCCCATTCTCTGTG GTTGGATCCAATCAGTTGATTGAAGCCAAAGGAAAGAAGGTCAGAGGCCGCCTCTACCCCTGGGGTGTTGTGGAA GTGGAGAACCCAGAGCACAATGACTTTCTGAAGCTGAGAACCATGCTCATCACCCACATGCAGGATCTCCAGGAG GTGACCCAGGACCTTCATTATGAAAACTTCCGTTCTGAGAGACTCAAGAGAGGCGGCAGGAAAGTGGAGAATGAG GACATGAATAAAGACCAGATCTTGCTGGAAAAAGAAGCTGAGCTCCGCCGCATGCAAGAGATGATTGCAAGGATG CAGGCGCAGATGCAGATGCAGATGCAGGGCGGGGATGGCGATGGCGGGGCTCTCGGGCACCACGTG<u>TAA</u>GGTGAT GTGCACATATCAAGAAGTCAGAGAAAACACTTTCCTGGATAAAAAAGAAAACATTCCAGATGCATGATCCAGCTG TGTGTTTTCAATCCTTGGGAGGGTGCCATCCACATTTTAACAGTACCTGTGCCTGAGAATTTAATTTTTAAAAGA TGAATGTCTTCCTTTTCTCCCCTAACCACTAATGTTAGAATTGATTTCCAAGAATCGGCATGTATACTTAAT ACTGAATTTCTTTGATTTAACTGACTTAACAACTGACTAACCATTGATGAGCACTCCTGATTTTTATCTAGAACA TTCAGATTTACCATAATGTTCCTTAGTGGTAGAGGTGTGCCTAGTGATGTAGAAAGATACACTGACTTGGTGC AAGGCCATCTGCTTACCACACCACCACCTTGGAGATCTTTGCTTCCTTGCTTTATGTTTGTACACAACACCTA AAACCAGTTTTGCTGCTATAATTCTATACTGTTGATTCGTCTGCGATTTTATCTGTTAACCAAATAAAACATAAT AGAATTTCCTAATGAGATATATCTTTATACTTAAACAGCTTTTTTTAGAGGTGAGTTTTAAAGAAGTCTCTTAATT CTGATGCTAGGTTGTTTTTAAAACCACTATGCAAAGAACTCACCACAAGCCACCTTTTGTAGTGTTCTCCACTAA TACTGGTTATCCTGTGCTACAGAGAAATCAAAGCAGTCATAAGCTCCAGTTTTCCGTATTGCAAATAAGACTCT AGCAGTTGGTCTATTCAGAATCAAACCTTTTTATATTTTATACTGCACTTTAGTGTATTTTCTGTCACTGTAGGT ATAGAAGATCTGCCTCCCCTGTGGAAATTGGGGTCTGTTGGTGGGCTTGCCCCTGAAGCCTGGCTTGGGTTGAAA AGTGTTCCCGCCCTAAGGCCTTGGTGCCCTGAACCTCTGATGCCTACCGGGTTCTCCTGATTTGAGTTTCCTTTA AATACTCCCTTTTTGAGTAATTTTCTGATGGGAGGAAAGTAGCAGTCATCTTTTTGTGTGCAGGCTGTCTCA TTTATTTTTAGCCATTGTCGTTTCATTCATTTTGTGTAATATAAACCGTGTGTCATGTCAAAGTGAAAGACATTT CAAATCTGTAGCATAGGCTAGTGGGCAGGTCCGCACAGTCGAAGCCACACCTGGTCTGTTTTCTGTGCACTGTAG CCTTAGTGTCACCTTTCTTCTTGTGTCTCCTTATGGTACACTCCAGCGGTTGCCTTTTTTATCATTTCTACTGAA GTTGGGAAATTCAACCCCAGAAATTGACAGATGAAAGGAGACAATGGTTGTGTAGGGAGATGGAGAAAATGCTTA ATCTGAGGATGAGACAGGGTTTTTTCATTTTTGTGGGGGGCTAGAAAAAACATAAAATGAGGCAGTTAAATAA TAGTTAATGAAGGTGTGCTACAGAAAATAATCTGGTGTTCTTGCTAACTTTGCCCTTCACTGTTGCTTAATTGTG AACAGCCAAAAGCTATATGTTATGGCTTATTGTGTGAAGGTAACTAAGAAGTGGTGTTCCATGACTTCAGAGTAC ATCCATGCGGAGTCCATTATTTGAGTTTGACATTTAATAACTTTGCTGGAAAATCTGTAAAAAAAGAAAAACAAGT TTGCTAGTGACTAAGCCCCGCATATGTGAGTGAAAGTACTTCAGGCACGCTGCCTCCTGGTAACAGCTATGCAGG GAGGGAGGACCCACACTGCTACACTTCTGATCCCCTTTGGTTTTACTACCCAAATCTAAATAGATACTTTTGATA ATAGATAACTGCTCTTTTACTAAGACATAGTCTCTACCTATAGAAATGTATTTTGAAAACACTTATTTTACACAG CAATTTTGTATCCATTTAAACTAACCTTTTATCAATAAAGCACTATTGTTTAGATATT

 $\label{thm:construction} MSKQQPTQFINPETPGYVGFANLPNQVHRKSVKKGFEFTLMVVGESGLGKSTLINSLFLTDLYPERVIPGAAEKI ERTVQIEASTVEIEERGVKLRLTVVDTPGYGDAINCRDCFKTIISYIDEQFERYLHDESGLNRRHIIDNRVHCCF YFISPFGHGLKPLDVAFMKAIHNKVNIVPVIAKADTLTLKERERLKKRILDEIEEHNIKIYHLPDAESDEDEDFK EQTRLLKASIPFSVVGSNQLIEAKGKKVRGRLYPWGVVEVENPEHNDFLKLRTMLITHMQDLQEVTQDLHYENFR SERLKRGGRKVENEDMNKDQILLEKEAELRRMQEMIARMQAQMQMQMGGGDGGALGHHV$

CACCGAGCGCCCTGGTGTCCCTCGCAGTGGACTGACGCCGCAGGGGCGAGCTAGCCGGCTCCGCGCCTCTCCGC GGGATCCAGACGCCTCCTGGGGGCTGCTGGCGGAGGGTCTGAGGCGGCGCGCCATGGCTCACCTCCGGGGATTTG CCAACCAGCACTCTCGAGTGGACCCTGAGGAGCTCTTCACCAAGCTCGACCGCATTGGCAAGGGCTCGTTTGGGG AGGTCTACAAGGGCATCGATAACCACAAAAGGAGGTGGTGGCCATCAAGATCATCGACCTGGAGGAGGCCGAGG GCTCCTACCTAAAGAGCACCAAGCTATGGATCATCATGGAGTACCTGGGCGGCGGCTCAGCACTGGACTTGCTTA AACCAGGTCCCCTGGAGGAGACATACATTGCCACGATCCTGCGGGAGATTCTGAAGGGCCTGGATTATCTGCACT CCGAACGCAAGATCCACCGAGACATCAAAGCTGCCAACGTGCTACTCTCGGAGCAGGGTGACGTGAAGCTGGCGG ACTTTGGGGTAGCAGGCAGCTCACAGACACGCAGATTAAGAGGAACACATTCGTGGGCACCCCCTTCTGGATGG CACCTGAGGTCATCAAGCAGTCGGCCTACGACTTCAAGGCTGACATCTGGTCCCTGGGGGATCACAGCCATCGAGC TGGCCAAGGGGGAGCCTCCAAACTCTGACCTCCACCCCATGCGCGTCCTGTTCCTGATTCCCAAGAACAGCCCAC TCATCGACCGCTATAAGCGCTGGAAGTCAGAGGGGCATGGCGAGGAGTCCAGCTCTGAGGACTCTGACATTGATG TTCACAAGGGGACGCCCTGCACAGTTCACAGAAGCCTGCGGAGCCCGTCAAGAGGCAGCCGAGGTCCCAGTGCC TGTCCACGCTGGTCCGGCCCGTCTTCGGAGAGCTCAAAGAGAAGCACAAGCAGAGCGGCGGGAGCGTGGGTGCGC TGGAGGAGCTGGAGAACGCCTTCAGCCTGGCCGAGGAGTCCTGCCCCGGCATCTCAGACAAGCTGATGGTGCACC TGGTGGAGCGAGTGCAGAGGTTTTCACACAACAGAAACCACCTGACATCCACCCGCTGAAGCGCACTGCTGTTCA GATAGGGGACGGAAGGTCGTTTGTTTTTGTTCTGAGCTCCATAAGAACTGTGCTGACTTGGAAGGTGCCCTGTGC TATGTCGTGCCTGCAGGGACACGTCGGATCCCGTGGGCCTCACATGCCAGGTCACCAGGTCACCGTCTCCTTCCA GCAGTATTGCTCACGGGGGCTCCAGCCGCCGGCGTGGCCCTCATGAGCTACGCCTGGGTCTTCTGCAGACTCATG CAGCCCTATGGCCGCTCAGACCAAGGCGCAGAGCAACTATCAGGGCAGCTCTGCCTCCTCCCCATGAGGTGGG GAGAGGCAACAGGGCAGCCCCCAGAGGAGTGTCCTGGCCGCTGTCCTCCCGGGGCCCATGATGGCCATAGATTTG CCTTGTGGTGTTGGATCAGGTACTGTGTCTGCTCATAAGTACTTGTGTCATCCAGAATGTTTTGTTTTTTAAGAA AATTGAATTACTTGTTTCCTGAAA

GGCACGAGGCCAATCCCATGCCTGGGGGAGAGACAGCGGCTCAGGAGTGGGGGAGCACGGGCCTTCTACACCACA TGGGAAGGCTCTGGCATGAGGTTTTCCTTTGGGAAGGTTGTTTGGGCCCCTGAAGTTCCATCTCCGAGAGTGGTG GCTCTCCCAGGGGCTGATGGGGGGGTTCTGTGAGGGAGAATCAGGGCTCGGGAAGCCACGCCTGGGAAGGCAGGA CACAGGACACAGCATTTCTTTGGAAATCTCCCAGGTGAGGATTCACATCCCAAAATAAAATTCAGAAGCCAGG TGGCCTGTGCTCCCCATGGGTGACCTCTGGAGGCAGTGGACCAAGATGCAGCAAGGAGGAGGATGCAGAACAGCTT TGAGATGAGGGGGAGCCCCATGGGCCCCAGGCAGGCTAGAGGAGGCACAGGCCCTGCCACGGCCAACTCAGGTCA GCAGAGCACTCGCGGCGTGGGTGGGCTGAGTGGAGGTGCCTGGGAGCTGCCTAAATTCAGAAGCCTCCACTGCCA TGGAGACTGCCTGGCTGTGTCCTCTCAGCCAGGTGCCGTGTTGGCCTTGGCTAGGACCCAGAGCCACACTGCAGC CTCCGCCGACTCCCTCCTCCGGGCCTGCTCTAGTGAGGAGTGCCTAAGCCAGGACCCAGAAACTCAGAGTTGAT GGTGAGAGGGCCGCCTGAGTCAGGACACCTGGCTTCTTGAAAAGTTCGCTCTGCCAGAAACCACCTAGGGACC ACGTTAGCTGCCTTCCTTGAGCTCCCCAGGAGTCGGTTTCCACATCTGTGAGGTGGAGGGCTGGTGTGGAGGTGC TCATGGGGTGCGTGCTTGGGAGACAGCCAGGCCCAGGGTGGCTGCTTCCTGCTAAGTGGGGAGGTGAGAC AGATCTGGAAAGCCGTCTCCCTCAGATGGTTTCATTTAATGCTTTATACTGCCGAGTCTGGGGGGCTTGTTTTGGT CCAGGCCGACCAGCACTTGGGATCTGATGGGACACGGCCAGTGCCTAGGGGTGCCAAGTCCAAGGCCTCCCACTG GTG<u>ATG</u>AGGTGGCCCTCCCTGTCAACCCTGGTCCCTGGAGTCCCCAGCACCTGGGGCCCTGGTGGGGCCTGATGTC ACAGGTGTTTACTGTGCTGCACCGGTCCTATGCCAGCCTCACCCATGTGGGGACCACGGAAGGCACACTCCC TTACCCCGGTGCCGGGCCGTGCGGTCCCCCAGACGGACAGCAGCTGTGGCGACCTGCGTTTCTCCCTGGGCCTG ${\tt TGCTTCCTG} \underline{{\tt TAG}} {\tt TTAGTCCGTCCCCTGGTTCCCCTGTGGCTCAGAGGCCGCGTCCCTGGCTTGTACATATGTGAT$ TGCTGTGGGCACACCCCAGACCCCATGTCATAGCTGCCGTCCCGACGTCACGACGCCTGTCCCGATGTCTTACAC ТАСТСААСАСААААААААААААААААААААААААААА

 ${\tt MRWPSLSTLVPGVPSTWGPGGADVTGVYCAAALVLCQPHPCGDHGRHTPLPPVPGRAVPQTDSSCGDLRFSLGLC} {\tt FI.}$

GCGGCAACAGCGGGGCCGATGTTGTTGGTGACTGCCTCTCCAGATGCTGAGGTGCCTGTATCATTGGCACAGG CCAGTGCTGAACCGTAGGTGGAGTAGGCTGTGCCTTCCGAAGCAGTATCTATTCACAATGAAGTTGCAGTCTCCC GAATTCCAGTCACTTTTCACAGAAGGACTGAAGAGTCTGACAGAATTATTTGTCAAAGAGAATCACGAATTAAGA ATAGCAGGAGGAGCAGTGAGGGATTTATTAAATGGAGTAAAGCCTCAGGATATAGATTTTGCCACCACTGCTACC $\verb|CCTACTCAAATGAAGGAGATGTTTCAGTCGGCTGGGATTCGGATGATAAACAACAGAGGAGAAAAGCACGGAACA|\\$ ATTACTGCCAGGCTTCATGAAGAAAATTTTGAGATTACTACACTACGGATTGATGTCACCACTGATGGAAGACAT GCTGAGGTAGAATTTACAACTGACTGGCAGAAAGATGCGGAACGCAGAGATCTCACTATAAATTCTATGTTTTTA CATGCTAAACAGAGAATACAAGAGGATTATCTTAGAATTTTAAGATACTTCAGGTTTTATGGGAGAATTGTAGAC AAACCTGGTGACCATGATCCTGAGACTTTGGAAGCAATTGCAGAAAATGCAAAAGGCTTGGCTGGAATATCAGGA GAAAGGATTTGGGTGGAACTGAAAAAATTCTTGTTGGTAACCATGTAAATCATTTGATTCACCTTATCTATGAT CTTGATGTGGCTCCTTATATAGGTTTACCTGCTAATGCAAGTTTAGAAGAATTTGACAAAGTCAGTAAAAATGTT GATGGTTTTTCACCAAAGCCAGTGACTCTTTTGGCCTCATTATTCAAAGTACAAGATGATGTCACAAAATTGGAT GCAACAGATAGTTCAGACCCATTGAAACCCTATCAAGACTTCATTATAGATTCTAGGGAACCTGATGCAACTACT $\tt CGTGTATGTGAACTACTGAAGTACCAAGGAGAGCACTGTCTCCTAAAGGAAATGCAGCAGTGGTCCATTCCTCCA$ TTTCCTGTAAGTGGCCATGACATCAGAAAAGTGGGCATTTCTTCAGGAAAAGAAATTGGGGCTCTATTACAACAG TTGCGAGAACAGTGGAAAAAAAGTGGTTACCAAATGGAAAAAGATGAACTTCTGAGTTACATAAAGAAGACCTAA AACTGATGGCTACTAAAAAGCAGAGCATTT

GGACACCGGGCCATGCACGCCCCCAACTGAAGCTGCATCTCAAAGCCGAAGATTCCAGCAGCCCAGGGGATTTCA AAGAGCTCAGACTCAGAGGAACATCTGCGGAGAGACCCCCGAAGCCCTCTCCAGGGCAGTCCTCATCCAGACGCT $\verb|CCGCTAGTGCAGACAGGAGCGCGCAGTGGCCCGCGCCATGGAGCGGATCCCCAGCGCGCAACCACC| \\$ $\verb|CCCCGCCTGCCCAAAGCACCGGGACTGGAGCACGGAGACCTACCAGGGATGTACCCTGCCCACATGTACCA|\\$ AGTGTACAAGTCAAGACGGGGAATAAAGCGGAGCGAGGACAGCAAGGAGACCTACAAATTGCCGCACCGGCTCAT CGAGAAAAAGAGACGTGACCGGATTAACGAGTGCATCGCCCAGCTGAAGGATCTCCTACCCGAACATCTCAAACT TACAACTTTGGGTCACTTGGAAAAGCAGTGGTTCTTGAACTTACCTTGAAGCATGTGAAAGCACTAACAAACCT AATTGATCAGCAGCAGCAGAAAATCATTGCCCTGCAGAGTGGTTTACAAGCTGGTGAGCTGTCAGGGAGAAATGT TGGTACCTCCAGGAAGCCATCAGACCCAGCTCCCAAAGTGATGGACTTCAAGGAAAAACCCAGCTCTCCGGCCAA AGGTTCGGAAGGTCCTGGGAAAAACTGCGTGCCAGTCATCCAGCGGACTTTCGCTCACTCGAGTGGGGAGCAGAG CGGCAGCGACACGGACACAGACAGTGGCTATGGAGGAGAATCGGAGAAGGGCGACTTGCGCAGTGAGCAGCCGTG $\verb|CTTCAAAAGTGACCACGGACGCAGGTTCACGATGGGAGAAGGATCGGCGCAATTAAGCAAGAGTCCGAAGAACC| \\$ CCCCACAAAAAAGAACCGGATGCAGCTTTCGGATGATGAAGGCCATTTCACTAGCAGTGACCTGATCAGCTCCCC CCTGCCCATGCTGGAGAAGTGCTGGTATCCCACCTCAGTGCCAGTGCTATACCCAGGCCTCAACGCCTCTGCCGC AGCCCTCTCTAGCTTCATGAACCCAGACAAGATCTCGGCTCCCTTGCTCATGCCCCAGAGACTCCCTTCTCCCTT GCCAGCTCATCCGTCGACTCTTCTGTCTTGCTCCAAGCTCTGAAGCCAATCCCCCCTTTAAACTTAGAAAC TTTTTGTGAATGCTGCAAGATTGTTGCATTGTGTATACTGAGATAATCTGAGGCATGGAGAGCAGATTCAGGGTG TGTGTGTGTGTGTGTGTGTGTGTGTGCGTGCGTGCACATGTGTGCCTGCGTGTTGGTATAGGACTTTAAAG GGCTTTTCCCCACCCAGAGAATAGCCCCCTTCGATACACATCAGCTGGATTTTCAAAAGCTTCAAAAGTCTTGGTC TGTGAGTCACTCTTCAGTTTGGGAGCTGGGTCTGTGGCTTTGATCAGAAGGTACTTTCAAAAAGAGGGCCTTTCCAG GGCTCAGCTCCCAACCAGCTGTTAGGACCCCACCCTTTTGCCTTTATTGTCGACGTGACTCACCAGACGTCGGGG AGAGAGAGCAGTCAGACCGAGCTTTCTGCTAACATGGGGAGGTAGCAGGCACTGGCATAGCACGGTAGTGGTTTG GGGAGGTTTCCGCAGGTCTGCTCCCCACCCCTGCCTCGGAAGAATAAAGAGAATGTAGTTCCCTACTCAGGCTTT AGAAATGCGGACACCCCGAGCGAGCACCCCAAAGTGCACAAAGCTGAGTAAAAAGCTGCCCCCTTCAAACAGAAC TAGACTCAGTTTTCAATTCCATCCTAAAACTCCTTTTAACCAAGCTTAGCTTCTCAAAGGCCTAACCAAGCCTTG GCACCGCCAGATCCTTTCTGTAGGCTAATTCCTCTTGCCCAACGGCATATGGAGTGTCCTTATTGCTAAAAAGGA ${\tt CAGCTTTTCAAAATGCACTATGCCTGATTGCTGATCGTGTTTTAACTTTTTCTTTTCCTGTTTTTATTTTGGTAT}$ ATTTTTTTTTTCTCTAGGGAGGGTACAGTGTTTATATTTTGGAGCCTTCCTGAAGGTGTAAAATTGTAAATATT TTTATCTATGAGTAAATGTTAAGTAGTTGTTTTAAAATACTTAATAAAATAATTCTTTTCCTGTGGAAG

GCGGCTTCCGGCGGCGTGACCTGACCGCAAGAGGCCCAATGGAGTGTGGGAGCTGAAAGGGTCTTCGCTGGCGGCC GGTAACTGGCGGCGGTTGGGAACGGCCGAGTGTGGCTCTTCTGGTGTTTCAGCTTGGGGAGAGAGGGGTGGCCTT CCTCTTGCAGTTGAGGCCGGCCCGAGCCGGACTTCAGGCGGATCTCGTGGCGGAGCCCATCTTGCTCCCTCTCC CAGGCCTTTACCCGCTCCCTAGGATTCCCGGGCCCTGTAGGTGGGAGTTGGGAGACGACAGTACTGCTTTTAAAG AGACAGTGTTAGGGATCTTGGAAGCACAGCCAAC<u>ATG</u>TGTGACATTGAAGAAGCCACTAACCAACTCCTAGATGT GAACCTTCATGAGAACCAGAAGTCTGTACAAGTGACAGAAAGTGACCTCGGAAGTGAATCTGAGCTTCTAGTCAC TATTGGAGCCACTGTACCTACTGGCTTTGAGCAAACAGCTGCAGATGAAGTCAGAGAGAAACTTGGGTCATCATG CAAAATCAGCAGAGACCGTGGCAAGATATATTTTGTCATTTCAGTGGAAAGTCTGGCACAGGTTCATTGTCTGAG AAAGGATTTTGAAGACTTGGCTGGAAAACTCCCATGGTCAAACCCCTTAAAAGTGTGGAAAATTAATGCCAGTTT TAAAAAGAAAAAGCAAAGCGCAAAAAGATAAATCAGAATTCAAGTAAAGAGAAGATTAATAATGGACAAGAAGT CAAAATCGATCAGAGAAATGTTAAAAAAGAGTTCACTAGCCATGCTTTAGATTCTCATATCTTAGATTATTATGA AAATCCAGCCATCAAAGAGGATGTATCAACATTAATAGGTGATGATTTGGCATCTTGCAAAGATGAGACTGATGA AAGCTCAAAAGAAGAAACTGAGCCTCAAGTGCTGAAGTTTAGAGTCACATGCAACAGGGCAGGAGAAAACATTG CTTTACCTCAAATGAGGCTGCAAGAGATTTTGGGGGTGCTGTTCAAGATTATTTTAAGTGGAAGGCCGACATGAC CAACTTTGATGTGGAGGTTCTTTTGAACATCCATGATAATGAAGTCATTGTGGGCATTGCATTGACTGAAGAGAG TCTCCACCGAAGAAATATAACACATTTTGGACCTACAACTCTTAGATCAACTCTTGCCTATGGGATGCTCAGGCT CTGTGATCCTCTACCTTATGATATAATAGTCGATCCAATGTGTGGAACTGGGGCAATACCAATAGAGGGGGCCAC TGAATGGTCTGACTGTTTCCATATTGCTGGTGATAATAATCCACTGGCTGTGAATAGAGCAGCAAATAACATTGC ATCTTTATTGACCAAGAGCCAAATTAAAGAAGGCAAACCCTCCTGGGGCTTGCCCATAGATGCTGTTCAGTGGGA TATCTGCAATCTGCCGTTGAGAACTGGCTCTGTGGATATTATTGTAACAGATTTGCCATTTGGAAAAAGGATGGG ATCCAAGAAGAGAAACTGGAACCTTTATCCAGCTTGCCTACGCGAGATGAGCCGTGTCTGCACACCTACCACAGG CCGAGCTGTACTACTCAAGACACAAAATGCTTTACCAAGGCGTTATCTGGAATGCAACACGTATGGCGAAA GGTGGATACAGTCTGGGTGAACGTTGG IGGTCTTCGTGCTGCAGTTTACGTTCTGATACGTACACCTCAAGCTTT $\tt TGTTCATCCTTCAGAACAAGACGGAGAAAGAGGGAACTCTTTGGCAATGCAAAGAA\underline{\textbf{TGA}} \textbf{AGATGACTAATAGTACT}$ TGTACTTCCCACCACTGGAAATGTTAGCATAAAAGAACTTGGAGAGGAAAAAAGTATTAACAAAACTGCAGTCTG CACTCTTTAAACCTGTTTAAGGCTCTTCATCCTGGTTAGCAAAAGGTGTGAATGTAATGTGATGGAATTTAAAAG TTTTATGAGACCAGGCACAGTGGCTCACGACTGTAATTCCAGCAGTTTAGGAAGCCGAAGTGTGCAGATCACCTG AGGTCCGGAGACCAGCCTGGCCAACATGGTGAAACCCTGTCTCTACTAGAAATACAAAAATTAGCCAGGTGTGGT GGCGGGCGCCTGTAATCCCAACTACTCAGGAGGCTGAGGCTAGAGAATCACTTGAACCCAGCAGGCGGAGGTTGC GGTGAGTCGAGATCACGCCATTGCACTCCAGCCTGTGCGACAAGAGCGAAACTCTGTCTCAAAAAAGATTTTATAA GAAAGCAGAGCTTTTCCTTGAAGCTCTTTTGAAGTGGTAGCTTAATTAGTATTTTGTTGAAAAATACTTTAAAGAT GCCTAGTGAAAAGCCTACTAAAGTGCTGTGAGATTGGGGTTTAGAACATTTTATTTTCAGGCTTTATGGCCTATT TCATTCTTTGCAGCTTTGCTAATCCAGTTGCTCAAGTTCTTTACCTCAACCTGAAGGAATGAAGCATTATTACAT TTTGTGAATGGTGTTCAGCCTATAAGACGAAGTCTCACAAGACCTATAGGAAAGTTTACCATCTGCCTAAATATT AAAATATCCATCTGTTATTCACATTAATACACAGAATGAAAATAGAGGTCTAGGAATTATCAAAGGTACTGCAAA AATACTGTATAGAACTTATTTGTAAATAGCACATACATTGATAGATGGGGTGTGGGACCAACAAACCAAATTAAA AGAAATTGTTTTCTTTCAGTACACTAAGGTGTGTGTTTTCAAAACC

MCDIEEATNQLLDVNLHENQKSVQVTESDLGSESELLVTIGATVPTGFEQTAADEVREKLGSSCKISRDRGKIYF VISVESLAQVHCLRSVDNLFVVVQEFQDYQFKQTKEEVLKDFEDLAGKLPWSNPLKVWKINASFKKKKAKRKKIN QNSSKEKINNGQEVKIDQRNVKKEFTSHALDSHILDYYENPAIKEDVSTLIGDDLASCKDETDESSKEETEPQVL KFRVTCNRAGEKHCFTSNEAARDFGGAVQDYFKWKADMTNFDVEVLLNIHDNEVIVGIALTEESLHRRNITHFGP TTLRSTLAYGMLRLCDPLPYDIIVDPMCGTGAIPIEGATEWSDCFHIAGDNNPLAVNRAANNIASLLTKSQIKEG KPSWGLPIDAVQWDICNLPLRTGSVDIIVTDLPFGKRMGSKKRNWNLYPACLREMSRVCTPTTGRAVLLTQDTKC FTKALSGMQHVWRKVDTVWVNVGGLRAAVYVLIRTPQAFVHPSEQDGERGTLWQCKE

GCAGGCAGGTGCCATGGGCCCGCTTGAGGCACACTGAGGGGACGCGGGGCTGGGCCATGGCCGGCGCTCGGGCCG TGCTGGAGGAGTTCTCCCGGACTCAGTACCGGGCCAAGGATGGCAGCGGGACCGGCGCTCTAAGGTTGAGCGCA TTGAGAAGAGATGTCTGGAGCTGTTTGGCCGAGACTACTGTTTCAGCGTGATTCCAAACACGAATGGGGATATCT GTGGCCACTATCCCCGGCACATCGTGTTCCTGGAGTATGAGAGTTCTGAGAAGGAGAAAGACACGTTTGAGAGTA CAGGCTACAACTATTTTTCTCAGGGGGTGCAGATGATGCCTGGGCAGATGTGGAGGACGTCACGGAGGAGGACT GTGCTCTTCGAAGTGGTGACACGCATCTTTTTGATAAGGTCAGAGGCTATGACATCAAGCTGCTTCGATACCTGT CAGTCAAATACATCTGTGACCTGATGGTGGAGAACAAGAAGGTGAAGTTTGGCATGAATGTAACCTCCTCTGAGA AGGTGGACAAAGCCCAGCGCTATGCCGACTTCACTCTCCTCTCCATCCCGTATCCAGGCTGTGAATTTTTCAAGG AATATAAAGATCGGGATTACATGGCAGAAGGGCTCATATTTAACTGGAAGCAGGACTACGTTGATGCCCCATTGA GCATCCCCGACTTCCTGACTCACTCTCTGAACATTGACTGGAGCCAGTATCAGTGTTGGGATCTGGTGCAACAAA CACAAAACTACCTGAAGCTGCTGCTTTCCTTAGTTAACAGTGATGATGACAGCGGGCTGCTGGTACACTGTATCT CAGGCTGGGATCGGACCCCCTCTTCATCTCCCTCCTGCGCCTTTCCTTGTGGGCTGATGGGCTCATCCACACGT CCCTGAAGCCCACTGAGATCCTCTACCTCACTGTGGCCTATGACTGGTTCCTCTTCGGGCACATGTTGGTAGATC GGCTCAGCAAAGGGGAGAGATTTTCTTCTTCTGCTTCAATTTTTTGAAGCATATTACCTCCGAGGAGTTCTCTG CTCTGAAGACCCAGAGGAGGAAGAGTTTGCCAGCCCGGGATGGAGGCTTCACCCTGGAAGACATCTGCATGCTGA GACGAAAGGACCGTGGCAGCACCACCAGCCTTGGCAGCGACTTCTCCCTGGTCATGGAGAGTTCCCCAGGAGCCA $\tt CTGGGAGCTTCACCTATGAGGCCGTGGAGCTGGTCCCAGCAGGAGCGCCAACTCAGGCAGCTTGGCTTGCAGCCC$ TGAGTGATCGAGAGACTCGGCTGCAGGAGGTGCGCTCAGCCTTCTTGGCTGCGTACAGCAGCACAGTGGGGCTTC GGGCAGTAGCCCCCAGTCCTTCCGGTGCCATCGGGGGCCTGCTGGAGCAATTTGCCCGTGGTGTTGGACTCCGGA ${\tt GCATCAGCAGCCATGACATTTTCCTGCTCCTCTCAGCTGAGCCCTTAGCA}$ GAGAATCAAAGCCATGCCTGGCCGAAGGGGTACTTCCAGGTCAGGGGAAATTTCAGTCCCCCATCTCCATCATGA CCCCTTCTTGTCACTGTCTCCCACCCCACCCCATCTTTGCTGGGATTCCCATCAACTCTCAGAACTGTGTGGGGTT TCCCTGGGGCCTTGTGGAAGCCATGACTTCACAAAGACCCTACCTGTCAGTTCTTGTTTCTGGGGAGGAGGATC AAA

MARCRGRFVCPVILFKGKHICRSATLAGWGELYGRSGYNYFFSGGADDAWADVEDVTEEDCALRSGDTHLFDKVR GYDIKLLRYLSVKYICDLMVENKKVKFGMNVTSSEKVDKAQRYADFTLLSIPYPGCEFFKEYKDRDYMAEGLIFN WKQDYVDAPLSIPDFLTHSLNIDWSQYQCWDLVQQTQNYLKLLLSLVNSDDDSGLLVHCISGWDRTPLFISLLRL SLWADGLIHTSLKPTEILYLTVAYDWFLFGHMLVDRLSKGEEIFFFCFNFLKHITSEEFSALKTQRRKSLPARDG GFTLEDICMLRRKDRGSTTSLGSDFSLVMESSPGATGSFTYEAVELVPAGAPTQAAWLAALSDRETRLQEVRSAF LAAYSSTVGLRAVAPSPSGAIGGLLEQFARGVGLRSISSNAL

1123/6881 FIGURE 1047A

 ${\tt CCGGACTCGAGGTGGCCGATGTGACAGC}$ GACTAAGCCACCATACGAGTGCCCGGTGGAGACCTGCCGAAAGGTCTACAAGAGTTACAGTGGTATTGAGTACCA CCTGTACCACTATGACCACGACAACCCACCACCACAACAACTCCACTCCGCAAGCACAAGAAAAAGGGGCG $\tt CTATGCACAGGCCCAGCGCATGGTGGAGGTGGACTTGCATGGCCGCGTCCACCGCATCAGCATCTTTGACAACCT$ GGATGTGGTGTCAGAGGATGAGGAAGCCCCCGAGGAGGCCCCTGAGAATGGCAGCAACAAGGAGAACACTGAGAC GCAGGAGATCTTTGAGTACCTAATGGACCGACTGGAGAAGGAGTCGTACTTTGAGAGTCATAATAAAGGCGACCC TAATGCGCTAGTGGACGAGGATGCTGTTTGCTGTATCTGCAATGATGGTGAGTGCCAGAACAGCAATGTCATCCT CTTCTGTGACATGTGCAACCTGGCCGTGCACCAGGAGTGCTACGGTGTCCCCTATATCCCTGAGGGCCAGTGGCT GTGCCGCCGTTGCCTGCAGTCACCCTCTCGTGCTGTGGATTGTGCCCTGTGCCCCAACAAGGGCGGTGCCTTCAA GCAGACAGATGACGGGCGCTGGGCCCATGTGGTGTGTGCCTTGTGGATCCCTGAGGTCTGCTTCGCCAACACGGT CTTCCTAGAGCCTATTGACAGCATTGAGCACATCCCACCAGCTCGCTGGAAGCTCACCTGCTACATTTGCAAACA ACGGGGCTCAGGGGCCTGCATCCAGTGCCACAAGGCCAACTGTTACACAGCTTTCCATGTGACATGCGCCCAGCA GGCTGGCCTTTACATGAAGATGGAGCCTGTGCGGGAGACAGGCGCCAACGGCACCTCTTTCAGTGTCCGCAAGAC GGATGAAGATGAGGAGGAGGATGAGGGTAAGGGCTGGAGCTCAGAGAAGTCAAGAAGGCCAAGGCCAAGTCCCG GATCAAAATGAAGAAGGCACGGAAGATCCTGGCAGAGAAGCGGGCAGCACCTGTGGTGTCAGTGCCCTGCAT CCCACCACAGGCTTAGTAAAATCACCAACCGCCTGACCATCCAAAGGAAGAGCCAGTTCATGCAGAGGCTGCA CAGCTACTGGACACTGAAGCGGCAGTCACGGAATGGGGTCCCATTGCTACGTCGCCTGCAGACACCTGCAATC TCAGAGGAACTGTGACCAAGTTGGGAGAGATTCTGAGGATAAGAACTGGGCCCTTAAAGAACAGCTCAAGTCCTG GCAGCGGCTCCGGCATGACTTGGAGCGAGCTCGGCTGCTCGTGGAATTGATCCGCAAGCGGGAAAAACTCAAAAG GGAGACGATCAAGGTTCAGCAGATTGCCATGGAGATGCAGCTGACTCCTTTCCTCATCCTCCTTCGCAAAACCTT AGACCACATCAAAAAGCCCATGGACTTTTTCACCATGAAGCAGAACTTGGAGGCTTACCGCTACCTGAATTTTGA TGATTTTGAGGAGGACTTCAACCTCATCGTCAGCAACTGCCTCAAGTATAACGCCAAGGACACCATCTTCTACCG GGCAGCAGTGCGGCTTCGTGAGCAGGGTGGTGCTGCTCCGCCAGGCCCGGCGCCAGGCAGAAAAAATGGGCAT GACGGCACTGCGGCGGAAGCTTGCCCATCAGCGAGAGACGGGACGTGATGGCCCTGAGCGGCATGGCCCCTCGAG CAGCCAGGAGACAAGCCAAGGCCTGGGTCCCAACATGTCCTCAACCCCCGCACATGAGGTGGGCAGGAGAACCTC GAGCCAGATGACCCCCAGCCACGGAGGCAGTCCTGTGGGGCCCCCCAGCTCCCCATCATGAGTTCCCTGCGTCA GCGCAAGCGGGGTAGGAGCCCCCGGCCCAGTTCGAGCTCAGACAGCGACAGTGATAAGTCCACAGAAGACCCCCC CAGCACAACGCCCTCAAAACAAGGCCGGGGCAAACCCTCCTTCTCTCGGGGCACTTTCCCAGAGGACAGCAGTGA GGATACCTCAGGCACTGAGAATGAGGCCTACTCCGTGGGCACTGGCCGCGGCGTGGGCCACAGCATGGTAAGGAA GAGTCTGGGCCGGGGAGCTGGCTGTCAGAGGATGAGGACTCCCCGCTGGATGCTCTGGACCTCGTGTGGGC CAAATGCCGAGGCTATCCATCATACCCAGCTCTGATCATTGATCCAAAGATGCCCCGAGAAGGTATGTTCCACCA TGGGGTTCCCATCCCTGTGCCCCCACTGGAGGTGCTGAAACTTGGGGAGCAGATGACCCAGGAAGCCCGAGAGCA TCTCTACCTCGTCCTCTTCTTTGACAACAAACGAACCTGGCAGTGGCTGCCCAGGACCAAGCTGGTTCCTCTGGG TGTGAACCAGGACCTAGACAAGGAGAAGATGCTGGAGGGCCGCAAGTCCAACATCCGCAAGTCAGTACAGATCGC

FIGURE 1047B

MGVDFDVKTFCHNLRATKPPYECPVETCRKVYKSYSGIEYHLYHYDHDNPPPPQQTPLRKHKKKGRQSRPANKQS PSPSEVSQSPGREVMSYAQAQRMVEVDLHGRVHRISIFDNLDVVSEDEEAPEEAPENGSNKENTETPAATPKSGK HKNKEKRKDSNHHHHHNVSASTTPKLPEVVYRELEQDTPDAPPRPTSYYRYIEKSAEELDEEVEYDMDEEDYIWL DIMNERRKTEGVSPIPQEIFEYLMDRLEKESYFESHNKGDPNALVDEDAVCCICNDGECQNSNVILFCDMCNLAV HQECYGVPYIPEGQWLCRRCLQSPSRAVDCALCPNKGGAFKQTDDGRWAHVVCALWIPEVCFANTVFLEPIDSIE ${\tt HIPPARWKLTCYICKQRGSGACIQCHKANCYTAFHVTCAQQAGLYMKMEPVRETGANGTSFSVRKTAYCDIHTPP}$ GSARRLPALSHSEGEEDEDEEEDEGKGWSSEKVKKAKAKSRIKMKKARKILAEKRAAAPVVSVPCIPPHRLSKIT $\tt NRLTIQRKSQFMQRLHSYWTLKRQSRNGVPLLRRLQTHLQSQRNCDQVGRDSEDKNWALKEQLKSWQRLRHDLER$ ARLLVELIRKREKLKRETIKVQQIAMEMQLTPFLILLRKTLEQLQEKDTGNIFSEPVPLSEVPDYLDHIKKPMDF ${\tt FTMKQNLEAYRYLNFDDFEEDFNLIVSNCLKYNAKDTIFYRAAVRLREQGGAVLRQARRQAEKMGIDFETGMHIP}$ HSLAGDEATHHTEDAAEEERLVLLENQKHLPVEEQLKLLLERLDEVNASKQSVGRSRRAKMIKKEMTALRRKLAH ORETGRDGPERHGPSSRGSLTPHPAACDKDGQTDSAAEESSSQETSKGLGPNMSSTPAHEVGRRTSVLFSKKNPK ${\tt TAGPPKNPGRPPKNRESQMTPSHGGSPVGPPQLPIMSSLRQRKRGRSPRPSSSSDSDSDKSTEDPPMDLPANGFS}$ ${\tt GGNQPVKKSFLVYRNDCSLPRSSSDSESSSSSSSSSAASDRTSTTPSKQGRGKPSFSRGTFPEDSSEDTSGTENEA}$ YSVGTGRGVGHSMVRKSLGRGAGWLSEDEDSPLDALDLVWAKCRGYPSYPALIIDPKMPREGMFHHGVPIPVPPL ${\tt EVLKLGEQMTQEAREHLYLVLFFDNKRTWQWLPRTKLVPLGVNQDLDKEKMLEGRKSNIRKSVQIAYHRALQHRS}$ KVQGEQSSETSDSD

GTACCCCCATCCTTTCTCTCGCCCCTCCTACCCGCAGCTCCTGGCGCGCGGGGGCTAACTGCAGCGCGGAGAT CTCGGCCGCCAAGCTCCGCCTCCCGCCCCGGGCTGTGCCCCGGGGCTCGCCTGAGGCCGACCACCCCCAC CTCTAGCGGCTTTGCTCGAGGCCCACCTTCTTCCCACCCCGGCAAACTCCAGTAGGCTCGCCCTCGCTGACTCC $\tt CCGCCCCGCGTCAACTGCAAGGGGCCCGCCCATAGCCAGTTCCGGGGCGGTTGCTCACATCGACCGGAACTCCCC$ ACTTCTGTGCCAGACACTGAACTGGGCTCTTGACGGGCATCATCTCTTAATCCTCAGAACATCCCAGGGAGCTCC ${\tt ACAGGATCCCCATATCCTGGGCC} \underline{{\tt ATG}} {\tt AGTGAGTTGAAAGACTGCCCCTTGCAGTTCCACGACTTCAAGTCTGTGG}$ ATCACCTGAAGGTCTGTCCCCGCTACACGGCAGTGCTGGCACGCTCTGAGGATGATGGCATCGAGGAGGC TGGACACCCTGCAGCTGGAGCTGGAGACCCTGCTGTCTTCTGCCAGCCGGCGCCTGCGTGTGCTTGAGGCCGAAA $\tt CCCAGATCCTCACCGACTGGCAGGATAAGAAAGGTGACAGACGATTCCTGAAGCTGGGTCGAGACCATGAACTTG$ GAGCTCCCCCAAACATGGGAAGCCCAAGAAGCAGAAACTGGAAGGGAAGGCAGGACATGGGCCGGGCCCTGGCC CAGGACGGCCCAAATCCAAAAACCTTCAGCCCAAGATCCAGGAATATGAATTCACTGATGACCCTATCGACGTGC CACGGATCCCCAAAAATGATGCCCCCAACAGGTTCTGGGCTTCAGTGGAGCCCTACTGTGCTGACATCACCAGCG AGGAGGTCCGCACACTTGAGGAGTTACTGAAGCCCCCAGAAGATGAGGCTGAGCATTACAAGATCCCACCCCTGG GGAAGCACTACTCCCAGCGCTGGGCCCAGGAGGACCTGCTGGAGGAGCAGAAGGATGGGGCCCGGGCAGCGGCTG TGGCTGACAAGAAGAAGGCCTCATGGGGCCACTGACCGAACTGGACACTAAAGATGTGGATGCCCTGCTGAAGA AGTCTGAGGCCCAGCATGAACAGCCGGAAGATGGATGCCCCTTTGGTGCCCTGACGCAGCGCCTCCTGCAGGCCC TGGTGGAGGAAAATATTATTTCCCCTATGGAGGATTCTCCTATTCCTGACATGTCTGGGAAAGAATCAGGGGCTG ACGGGGCAAGCACCTCCCCTCGCAATCAGAACAAGCCCTTCAGTGTGCCGCATACTAAGTCCCTGGAGAGCCGCA TTGCTGAGCTTCGCAAACGGCAGGCTGAGCTGAAGGCACTTAGTGCCCACAACCGCACCAAGAAGCACGACCTGC TGAGGCTGGCAAAGGAGGAGGTGAGCCGGCAGGAGCTGAGGCAGCGGGTGCGCATGGCTGACAACGAGGTCATGG ${\tt AGACTCTGAAGGAGCGTGAGAGCATCCTGAAGCTGCTGGATGGG} \underline{{\tt TAG}}{\tt CCCTCACCCCTGCCTCAGGCTGATTATC}$ TGGCCTAGGGGAGGGGAAGGGAGGCCCACTTCCTTCTTTGGGCACAGGAAACATTGGCCTGTGGCTGTCCCTCAA ATGGCGGCAGTCTCTAGAGGGCCGTGGCCCTTCCCCTGAGGTCTTTTGGCCTAGCTCTGTACAACCAGGACACAG GAAGCCCTGCTGGGCCTAGCCTGAGGCCTAGTCTCTGCTTGGTCCCCGAGATGGGGTTGGAGGGGACTTCGTTTCT GGGTCTTCCTCTTCCCCTCTTTACCATCCCCACTCCCTAATCCCCTACCCCTGTCTCCCCTTCAAGGACTTCTC

MSELKDCPLQFHDFKSVDHLKVCPRYTAVLARSEDDGIGIEELDTLQLELETLLSSASRRLRVLEAETQILTDWQ DKKGDRRFLKLGRDHELGAPPKHGKPKKQKLEGKAGHGPGPGPGRPKSKNLQPKIQEYEFTDDPIDVPRIPKNDA PNRFWASVEPYCADITSEEVRTLEELLKPPEDEAEHYKIPPLGKHYSQRWAQEDLLEEQKDGARAAAVADKKKGL MGPLTELDTKDVDALLKKSEAQHEQPEDGCPFGALTQRLLQALVEENIISPMEDSPIPDMSGKESGADGASTSPR NQNKPFSVPHTKSLESRIKEELIAQGLLESEDRPAEDSEDEVLAELRKRQAELKALSAHNRTKKHDLLRLAKEEV SRQELRQRVRMADNEVMDAFRKIMAARQKKRTPTKKEKDQAWKTLKERESILKLLDG

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FIGURE 1051

GTACCCCCATCCTTTCTCTCGCCCCTCCTACCCGCAGCTCCTGGCGCGCGGGGCTAACTGCAGCGCGGAGAT CTCGGCCGCCAAGCTCCGCCCCCGGGCTGTGCCCCGGGGCTCGCCTGAGGCCGACCACCCGCACCCCAC CTCTAGCGGCTTTGCTCGAGGCCCACCTTCTTCCCACCCCGGCAAACTCCAGTAGGCTCGCCCTCGCTGACTCC CCGCCCCGCGTCAACTGCAAGGGGCCCGCCCATAGCCAGTTCCGGGGCGGTTGCTCACATCGACCGGAACTCCC ACTTCTGTGCCAGACACTGAACTGGGCTCTTGACGGGCATCATCTCTTAATCCTCAGAACATCCCAGGGAGCTCC ${\tt ACAGGATCCCCATATCCTGGGCC} {\tt ATG} {\tt AGTGAGTTGAAAGACTGCCCCTTGCAGTTCCACGACTTCAAGTCTGTGG}$ ATCACCTGAAGGTCTGTCCCCGCTACACGGCAGTGCTGGCACGCTCTGAGGATGATGGCATCGGCATCGAGGAGC TGGACACCCTGCAGCTGGAGCTGGAGACCCTGCTGTCTTCTGCCAGCCGGCGCCTGCGTGTGCTTGAGGCCGAAA CCCAGATCCTCACCGACTGGCAGGATAAGAAAGGTGACAGACGATTCCTGAAGCTGGGTCGAGACCATGAACTTG GAGCTCCCCCAAACATGGGAAGCCCAAGAAGCAGAAACTGGAAGGGAAGGCAGGACATGGGCCCGGGCCCTGGCC CAGGACGGCCCAAATCCAAAAACCTTCAGCCCAAGATCCAGGAATATGAATTCACTGATGACCCTATCGACGTGC CACGGATCCCCAAAAATGATGCCCCCAACAGGTTCTGGGCTTCAGTGGAGCCCTACTGTGCTGACATCACCAGCG AGGAGGTCCGCACACTTGAGGAGTTACTGAAGCCCCCAGAAGATGAGGCTGAGCATTACAAGATCCCACCCCTGG GGAAGCACTACTCCCAGCGCTGGGCCCAGGAGGACCTGCTGGAGGAGCAGAAGGATGGGGCCCGGGCAGCGGCTG TGGCTGACAAGAAGAAAGGCCTCATGGGGCCACTGACCGAACTGGACACTAAAGATGTGGATGCCCTGCTGAAGA AGTCTGAGGCCCAGCATGAACAGCCGGAAGATGGATGCCCCTTTGGTGCCCTGACGCAGCGCCTCCTGCAGGCCC TGGTGGAGGAAAATATTATTTCCCCTATGGAGGATTCTCCTATTCCTGACATGTCTGGGAAAGAATCAGGGGCTG ACGGGGCAAGCACCTCCCCTCGCAATCAGAACAAGCCCTTCAGTGTGCCGCATACTAAGTCCCTGGAGAGCCGCA TCAAGGAGGAGCTAATTGCCCAGGGCCTTTTGGAGTCTGAGGACCGCCCCGCAGAGGACTCCGAGGATGAGGTCC TTGCTGAGCTTCGCAAACGGCAGGCTGAGCTGAAGGCACTTAGTGCCCACAACCGCACCAAGAAGCACGACCTGC TTTGATTTGTTTTTGTTTTTTTTTTGAGAGGGAGTCTCGCACTGTCACCCAGGCTGGAGTGCAGTGGCATG ATCTCGGCTCACTGCAAGCTCCGCCTCCCAGGTTCATGCCATTCTCCTGCCTCAGCCTCCTGAGTAGCTGATACT ACAGGCACCCACCACCACGCCAGCTAATTTTTTTGTATTTTTAGTAGAGACGGGGTTTCACCGTGTTAGCCAGG ATGGTCTCGATCTCCTGACCTCGTGATCCACCCGCCTCGGCCTCCCAAAGTGCCGGGATTACAGGCGTGAGCCAC TGCGCCTGGCCTAGTTTGGTTTTTAATTATGGTAAAGGCATAATATAAAATGTATCTCCATGGGAGGCTGAGGC AGGAGAATCAGTTGAACCTGGGAGGCGGAGGTTGCAGTGAGCTGAGACTGCACCATTGCATTCCAGCCTGGGCAA AAGTTTTGTTATTAAAAATTTGATACACACAGAAAATCTGAAAGAATCATACAATAAACATCAGTATATTCTCCA ССТАААААААААААААААА

MSELKDCPLQFHDFKSVDHLKVCPRYTAVLARSEDDGIGIEELDTLQLELETLLSSASRRLRVLEAETQILTDWQ DKKGDRRFLKLGRDHELGAPPKHGKPKKQKLEGKAGHGPGPGPGRPKSKNLQPKIQEYEFTDDPIDVPRIPKNDA PNRFWASVEPYCADITSEEVRTLEELLKPPEDEAEHYKIPPLGKHYSQRWAQEDLLEEQKDGARAAAVADKKKGL MGPLTELDTKDVDALLKKSEAQHEQPEDGCPFGALTQRLLQALVEENIISPMEDSPIPDMSGKESGADGASTSPR NQNKPFSVPHTKSLESRIKEELIAQGLLESEDRPAEDSEDEVLAELRKRQAELKALSAHNRTKKHDLLR

GTACCCCCATCCTTTCTCTCGCCCCTCCTACCCGCAGCTCCTGGCGCGCGGGGGCTAACTGCAGCGCGGAGAT CTCGGCCGCCAAGCTCCGCCTCCGCCCCGGGCTGTGCCCCGGGGCTCGCCTGAGGCCGACCACCCCCAC $\verb|CTCTAGCGGCTTTGCTCGAGGCCCACCTTCTTCCCACCCCGGCAAACTCCAGTAGGCTCGCCCTCGCTGACTCC| \\$ CCGCCCCGCGTCAACTGCAAGGGGCCCGCCCATAGCCAGTTCCGGGGCGGTTGCTCACATCGACCGGAACTCCC ACTTCTGTGCCAGACACTGAACTGGGCTCTTGACGGGCATCATCTCTTAATCCTCAGAACATCCCAGGGAGCTCC ACAGGATCCCCATATCCTGGGCCATGAGTGAGTTGAAAGACTGCCCCTTGCAGTTCCACGACTTCAAGTCTGTGG ATCACCTGAAGGTCTGTCCCCGCTACACGGCAGTGCTGGCACGCTCTGAGGATGATGGCATCGGCATCGAGGAGC TGGACACCCTGCAGCTGGAGCCTGGAGACCCTGCTGTCTTCTGCCAGCCGGCGCCTGCGTGTGCTTGAGGCCGAAA CCCAGATCCTCACCGACTGGCAGGATAAGAAAGGTGACAGACGATTCCTGAAGCTGGGTCGAGACCATGAACTTG GAGCTCCCCCAAACATGGGAAGCCCAAGAAGCAGAAACTGGAAGGGAAGGCAGGACATGGGCCGGGCCCTGGCC CAGGACGGCCCAAATCCAAAAACCTTCAGCCCAAGATCCAGGAATATGAATTCACTGATGACCCTATCGACGTGC CACGGATCCCCAAAAATGATGCCCCCAACAGGTTCTGGGCTTCAGTGGAGCCCTACTGTGCTGACATCACCAGCG AGGAGGTCCGCACACTTGAGGAGTTACTGAAGCCCCCAGAAGATGAGGCTGAGCATTACAAGATCCCACCCCTGG GGAAGCACTACTCCCAGCGCTGGGCCCAGGAGGACCTGCTGGAGGAGCAGAAGGATGGGGCCCGGGCAGCGGCTG TGGCTGACAAGAAGAAGGCCTCATGGGGCCACTGACCGAACTGGACACTAAAGATGTGGATGCCCTGCTGAAGA AGTCTGAGGCCCAGCATGAACAGCCGGAAGATGGATGCCCCTTTGGTGCCCTGACGCAGCGCCTCCTGCAGGCCC TGGTGGAGGAAAATATTATTTCCCCTATGGAGGATTCTCCTATTCCTGACATGTCTGGGAAAGAATCAGGGGCTG ACGGGGCAAGCACCTCCCCTCGCAATCAGAACAAGCCCTTCAGTGTGCCGCATACTAAGTCCCTGGAGAGCCGCA TCAAGGAGGAGCTAATTGCCCAGGGCCTTTTGGAGTCTGAGGACCGCCCCGCAGAGGACTCCGAGGATGAGGTCC TTGCTGAGCTTCGCAAACGGCAGGCTGAGCTGAAGGCACTTAGTGCCCACAACCGCACCAAGAAGCACGACCTGC $\tt TGAGG{\color{red}{\bf TGA}} GGGTTAGCAGGATGCACAGTCCCGGGGGTGGCCTTGGAGGCTGTGGCCACGGCTAGTCACCTTTCAG$ TTTGATTTGTTTTTGTTTTTTTTTTGAGAGGGAGTCTCGCCTGGGCAACAAGAGTGAAACTGCATCTCAAA AAAAAAAGAAAAAATTTACGCTTCTTAACCATTTTTAAGTGTACAGTTTAGTAGTGTTACCCATATTCACAT TGTTGTGTGATTTATTTTTTGTCTTTTCATGCTTCTTTTCTTTTTTATCCCCAAAGTTTTGTTATTAAAAAATTTGA

MSELKDCPLQFHDFKSVDHLKVCPRYTAVLARSEDDGIGIEELDTLQLELETLLSSASRRLRVLEAETQILTDWQ DKKGDRRFLKLGRDHELGAPPKHGKPKKQKLEGKAGHGPGPGPGRPKSKNLQPKIQEYEFTDDPIDVPRIPKNDA PNRFWASVEPYCADITSEEVRTLEELLKPPEDEAEHYKIPPLGKHYSQRWAQEDLLEEQKDGARAAAVADKKKGL MGPLTELDTKDVDALLKKSEAQHEQPEDGCPFGALTQRLLQALVEENTISPMEDSPIPDMSGKESGADGASTSPR NQNKPFSVPHTKSLESRIKEELIAQGLLESEDRPAEDSEDEVLAELRKRQAELKALSAHNRTKKHDLLR

MTATLRPYLSAVRATLQAALCLENFSSQVVERHNKPEVEVRSSKELLLQPVTISRNEKEKVLIEGSINSVRVSIA VKQADEIEKILCHKFMRFMMMRAENFFILRRKPVEGYDISFLITNFHTEQMYKHKLVDFVIHFMEEIDKEISEMK LSVNARARIVAEEFLKNF

 $\verb|CCAGGATAAGGGGCACAAGGGCCTCGGGTGTGGCCAGAGACCCCATGCTTAAGCTTTATGGTATAGGTCAGGCT|\\$ GCAGGGGTTTGAGGGCCTCAGTTGTATATCAGAATCTTCAGAGCACTGCGATGTTCAGGGGTGAGTCAGGTCTGT ${\tt AGATGTGCACGGGGTCTTCTGAAGGGTCAGTTTCTGTAATCACTTTCAGGTGTGTCAGGGCCTTGTGCAGTAACA}$ GTGCACACAGAAGTTAGTGTTTCTGTGGGCTAAGGGTTGTAGCTCTGTATCAGGATTCTGGGAGTGGGTCTGGAT ${\tt CAAGACTCCCAGGTGCATTTTAGGCAGAGCCTCAGGTGTGTTAGAGGTCCCAGGGGCAGAGAGGCTATAGGTGCT}$ GTCAGAGGCCTTGGGGACATTTAGGGCAGAGCCTCGAGTGACAGGTCCTGGGACAGTGGGAGCCAAGGGCAAGTG TCGTGCTGGGCCTCAGGTAAGTGACAGGCCTTAGGACAATGGGGGCTGTGGCATGCGTCAGGTTACCTGCCTTGA TATGGGATCGTGACAGGCCCCTCCCTATGTGCAGGAGACAAGCAGCCCAAGAAAACAGGAGAAAAACCCAGTGTTG GACAAGGACCTGGAGGCCCGCTGTACCTCACCCCGAGGGCTGGTCCCTCTTCCTCCAGCGCTACTACCAAGTG GTCCACGAAGGGGCAGAACTCAGGCACCTCGACACTCAGGTCCAGCGCTGTGAGGACATCCTGCAGCAGCTGCAG GCCGTGGTACCCCAGATAGACATGGAAGGGGATCGCAACATCTGGATCGTGAAGCCAGGAGCCAAGTCCCGCGGA CGAGGCATCATGTGCATGGACCACCTGGAGGAGATGCTGAAGCTGGTGAACGGCAACCCCGTGGTGATGAAGGAC GGCAAGTGGGTGCTGCAGAAGTATATTGAGCGGCCCCTCCTCATCTTTGGCACCAAGTTTGACCTCAGACAGTGG TTCCTGGTAACTGACTGGAACCCACTTACCGTGTGGTTCTACCGCGACAGCTATATCCGCTTTTCCACGCAGCCC CATCGGCATCCACTGCTTCCGCCAGACAACATGTGGTCTAGCCAGAGGTTCCAGGCCCACCTGCAGGAGATGGGT GCCCCAAATGCTTGGTCCACCATCATCGTGCCTGGCATGAAGGATGCTGTGATCCACGCACTTCAGACCTCCCAG GACACCGTGCAGTGTCGGAAGGCCAGCTTTGAGCTCTATGGCGCTGACTTCGTGTTCGGGGAGGACTTCCAGCCC TGGCTGATTGAGATCAACGCCAGCCCCACGATGGCACCCTCCACAGCAGTCACTGCCCGGCTCTGTGCTGGCGTG CAAGCTGACACCCTGCGCGTGGTCATTGACCGGATGCTGGACCGCAACTGTGACACAGGAGCCTTTGAGCTCATC TATAAGCAGCCCGTCACCACTTCCCCAGCCTCCACACCAAGGCCCAGCTGCCTTCTCCCCATGTACTCCGACACC ${\tt AGGGCCAGGTCCTCAGACGACAGCAGCCAGGCAAGCTGGTGGGCACTAAGGCCCTGTCGACCACAGGCAAGGCCT}{\underline{\bf TGA}}$

MDIDKDLEAPLYLTPEGWSLFLQRYYQVVHEGAELRHLDTQVQRCEDILQQLQAVVPQIDMEGDRNIWIVKPGAK SRGRGIMCMDHLEEMLKLVNGNPVVMKDGKWVVQKYIERPLLIFGTKFDLRQWFLVTDWNPLTVWFYRDSYIRFS TQPFSLKNLDNSVHLCNNSIQKHLENSCHRHPLLPPDNMWSSQRFQAHLQEMGAPNAWSTIIVPGMKDAVIHALQ TSQDTVQCRKASFELYGADFVFGEDFQPWLIEINASPTMAPSTAVTARLCAGVQADTLRVVIDRMLDRNCDTGAF ELIYKQPVTTSPASTPRPSCLLPMYSDTRARSSDDSTASWWALRPCRPQARP

 $\tt CGCCCAGTGCCCGAGGACGCAGGCTTTGGCACCGAAGCCCGGCATCAGAGGCAACCCCGCGGCTCCTGCCAACGG$ TCGGGGCCCCTCGGGGACCAGCCCTTCGCGGGGCTGCTGCCAAAAAACCTCAGTCGGGAGGAGCTGGTTGATGCG $\tt CTGCGGGCAGCCGTGGTGGACCGGAAAGGAAAACCAGGAGAGCTGACGTTGTTCTCAGTGCTGCCAGAGCTGAGC$ CTCTCCAGCTGTCCCCAGACAGCTAGTCGCCTCCAGAAGTACTTCACCCATGCACGGAGAGCCCAAAGGCCCACA GCCACCTACTGTGCTGTCACTGATGGGATCCCAGCTGCTTCTGAGGGGGAAGATCCAGGCTGCCCTGAAACTGGAA CACATTGATGGGGTCAATCTCACAGTTCCAGTGAAGGCCCCCATCCCGAAAGGACATCCTGGAAGGTGTCAAGAAG ACTCTCAGTCACTTTCGTGTGGTAGCCACAGGCTCTGGCTGTGCCCTGGTCCAGCTGCAGCCACTGACAGTGTTC TCCAGTCAACTACAGGTGCACATGGTACTACAGCTCTGCCCTGTGCTTGGGGACCACATGTACTCTGCCCGTGTG GGCACTGTCCTGGGCCAGCGATTTCTGCTGCCAGCTGAGAACAACAAGCCCCAAAGACAGGTCCTGGATGAAGCC CTCCTCAGACGCCTCCACCTGACCCCCTCCCAGGCTGCCCAGCTGCCCTTGCACCTCCACCTACATCGGCTCCTT CTCCCAGGCACCAGGGCCAGGGACACCCCTGTTGAGCTCCTGGCACCACTGCCCCCTTATTTCTCCAGGACCCTA AACTTTACCTCTCTGGACTTGTGATAATAAAAGTTCCTACCTC

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1138/6881 FIGURE 1061

MASRAGPRAAGTDGSDFQHRERVAMHYQMSVTLKYEIKKLIYVHLVIWLLLVAKMSVGHLRLLSHDQVAMPYQWE YPYLLSILPSLLGLLSFPRNNISYLVLSMISMGLFSIAPLIYGSMEMFPAAQQLYRHGKAYRFLFGFSAVSIMYL VLVLAVQVHAWQLYYSKKLLDSWFTSTQEKKHK

 ${\tt GGAAGTTGAGCGGCGGCAGAAATA} {\tt ATG} {\tt GCGGCAGCTACGGGGGATCCTGGACTCTCTAAACTGCAGTTTGCCCCC}$ TTTTAGTAGTGCCTTGGATGTTTGGCATGAGTTGACCCAGAAGAAGCTGAACGAGTATCGGCTGGATGA AGCTCCCAAGGACATTAAGGGTTATTACTACAATGGTGACTCTGCTGGGCTGCCAGCTCGCTTAACATTGGAGTT CAGTGCTTTTGACATGAGTGCTCCCACCCCAGCCCGTTGCTGCCCAGCTATTGGAACACTGTATAACACCAACAC ACTCGAGTCTTTCAAGACTGCAGATAAGAAGCTCCTTTTGGAACAAGCAGCAAATGAGATATGGGAATCCATAAA ATCAGGCACTGCTCTTGAAAACCCTGTACTCCTCAACAAGTTCCTCCTCTTGACATTTGCAGATCTAAAGAAGTA CCACTTCTACTATTGGTTTTGCTATCCTGCCCTCTGTCTTCCAGAGAGTTTACCTCTCATTCAGGGGCCAGTGGG TTTGGATCAAAGGTTTTCACTAAAACAGATTGAAGCACTAGAGTGTGCATATGATAATCTTTGTCAAACAGAAGG AGTCACAGCTCTTCCTTACTTCTTAATCAAGTATGATGAGAACATGGTGCTGGTTTCCTTGCTTAAACACTACAG TGATTTCTTCCAAGGTCAAAGGACGAAGATAACAATTGGTGTATATGATCCCTGTAACTTAGCCCAGTACCCTGG ATGGCCTTTGAGGAATTTTTTGGTCCTAGCAGCCCACAGATGGAGTAGCAGTTTCCAGTCTGTTGAAGTTGTTTG CTTCCGTGACCGTACCATGCAGGGGGGGGAGAGACGTTGCCCACAGCATCATCTTCGAAGTGAAGCTTCCAGAAAT GGCATTTAGCCCAGATTGTCCTAAAGCAGTTGGATGGGAAAAGAACCAGAAAGGAGGCATGGGACCAAGGATGGT GAACCTCAGTGAATGTATGGACCCTAAAAGGTTAGCTGAGTCATCAGTGGATCTAAATCTCAAACTGATGTTTG TTGCAATGTAGCTAGGACGTTGATGGGTTGGGGCGTGAGACACATCACATTTGTGGACAATGCCAAGATCTCCTA $\verb|CTCCAATCCTGTGAGGCAGCCTCTCTATGAGTTTGAAGATTGCCTAGGGGGTGGTAAGCCCAAGGCTCTGGCAGC| \\$ AGCGGACCGGCTCCAGAAAATATTCCCCGGTGTGAATGCCAGAGGATTCAACATGAGCATACCTATGCCTGGGCA TCCAGTGAACTTCTCCAGTGTCACTCTGGAGCAAGCCCGCAGAGATGTGGAGCAACTGGAGCAGCTCATCGAAAG AAAGCTGGTCATCAATGCTGCTTTGGGATTTGACACATTTGTTGTCATGAGACATGGTCTGAAGAAACCAAAGCA GCAAGGAGCTGGGGACTTGTGTCCAAACCACCCTGTGGCATCTGCTGACCTCCTGGGCTCATCGCTTTTTGCCAA CATCCCTGGTTACAAGCTTGGCTACTTCTGCAATGATGTGGTGGCCCCAGGAGATTCAACCAGAGACCGGAC CTTGGACCAGCAGTGCACTGTGAGTCGTCCAGGACTGGCCGTGATTGCAGGAGCCCTGGCCGTGGAATTGATGGT ATTTGACAAATGTACAGCTTGTTCTTCCAAAGTTCTTGATCAATATGAACGAGAAGGATTTAACTTCCTAGCCAA GGTGTTTAATTCTTCACATTCCTTCTTAGAAGACTTGACTGGTCTTACATTGCTGCATCAAGAAACCCAAGCTGC ${\tt TGAGATCTGGGACATGAGCGATGATGAGACCATC} \underline{{\tt TGA}}{\tt GATGGCCCGCTGTGGGGGCTGACTTCTCCCTGGCCGCC}$ TGCTGAGGAGCTCTCCATCGCCAGAGCAGGACTGCTGACCCCAGGCCTGGTGATTCTGGGCCCCTCCTCCATACC CCGAGGTCTGGGATTCCCCCCTCTGCTGCCCAGGAGTGGCCAGTGTTCGGCGTTGCTCGGGATTCAAGATACCAC

MAAATGDPGLSKLQFAPFSSALDVGFWHELTQKKLNEYRLDEAPKDIKGYYYNGDSAGLPARLTLEFSAFDMSAP
TPARCCPAIGTLYNTNTLESFKTADKKLLLEQAANEIWESIKSGTALENPVLLNKFLLLTFADLKKYHFYYWFCY
PALCLPESLPLIQGPVGLDQRFSLKQIEALECAYDNLCQTEGVTALPYFLIKYDENMVLVSLLKHYSDFFQGQRT
KITIGVYDPCNLAQYPGWPLRNFLVLAAHRWSSSFQSVEVVCFRDRTMQGARDVAHSIIFEVKLPEMAFSPDCPK
AVGWEKNQKGGMGPRMVNLSECMDPKRLAESSVDLNLKLMCWRLVPTLDLDKVVSVKCLLLGAGTLGCNVARTLM
GWGVRHITFVDNAKISYSNPVRQPLYEFEDCLGGGKPKALAAADRLQKIFPGVNARGFNMSIPMPGHPVNFSSVT
LEQARRDVEQLEQLIESHDVVFLLMDTRESRWLPAVIAASKRKLVINAALGFDTFVVMRHGLKKPKQQGAGDLCP
NHPVASADLLGSSLFANIPGYKLGCYFCNDVVAPGDSTRDRTLDQQCTVSRPGLAVIAGALAVELMVSVLQHPEG
GYAIASSSDDRMNEPPTSLGLVPHQIRGFLSRFDNVLPVSLAFDKCTACSSKVLDQYEREGFNFLAKVFNSSHSF
LEDLTGLTLLHQETQAAEIWDMSDDETI

 ${\tt MAALRPLVKPKIVKKRTKKFIRHQSDRYVKIKRNWRKPRGIDNRVRRRFKGQILMPNIGYGSNKKTKHMLPSGFRKFLVHNVKELEVLLMCNKSYCAEIAHNVSSKNRKAIVERAAQLAIRVTNPNARLRSEENE}$

CTGGAGGAGGAAGAAGAGGTGGATCCCCGGATCCAGGGAGAACTGGAGAAGTTAAATCAGTCCACGGATGATATC AACAGACGGGAGACTGAACTTGAGGATGCTCGTCAGAAGTTCCGCTCTGTTCTGGTTGAAGCAACGGTGAAACTG GATGAACTGGTGAAGAAAATTGGCAAAGCTGTGGAAGACTCCAAGCCCTACTGGGAGGCACGGAGGGTGGCGAGG ACCATCTCCCTGGCCGAGCAGCGGCTGCTGGAGGATGACAAGCGGCAGTTCGACTCCGCCTGGCAGGAGATGCTG GCCAGGTACAATGCCGCCATGGGCCGCATGCGACAGCTGGAGAAAACTCAAGAGAGCCCATCAACAAGTCCAAG CCTTATTTTGAACTCAAGGCAAAGTACTATGTGCAGCTCGAGCAACTGAAAAAGACTGTGGATGACCTGCAGGCC AAACTGACCCTGGCAAAAGGCGAGTACAAGATGGCCCTGAAGAACCTGGAGATGATCTCAGATGAGATCCACGAG CGGCGGCGCTCCAGTGCCATGGGGCCTCGGGGATGCGGTGTTGGTGCTGAGGGCAGCAGCACATCTGTGGAGGAT CTGCCAGGGAGCAAACCTGAGCCTGATGCCATTTCTGTGGCCTCGGAGGCCTTTGAAGATGACAGCTGTAGCAAC TTTGTGTCTGAAGATGACTCGGAAACCCAGTCCGTGTCCAGCTTTAGTTCAGGACCAACAAGCCCGTCTGAGATG CCTGACCAGTTCCCTGCGGTTGTGAGGCCTGGCAGCCTGGATCTGCCCAGCCCTGTGTCCCTGTCAGAGTTTGGG ATGATGTTCCCAGTGTTGGGCCCTCGAAGTGAATGCAGCGGGGCCTCCTCCCCTGAATGTGAAGTAGAACGAGGA GACAGGGCAGAAGGGGCAGAGAATAAAACAAGTGACAAAGCCAACAACAACCGGGGCCTCAGCAGTAGCAGTGGC AGTGGTGGCAGCAGTAAGAGCCAAAGCAGCACCTCCCCTGAGGGCCAGGCCTTGGAGAACCGGATGAAGCAGCTC ${\tt TCCCTACAGTGCTCAAAGGGAAGAGATGGAATTATTGCTGACATAAAAATGGTGCAGATTGGC\underline{{\tt TGA}}{\tt TTCATCCTG}$ GGCCCTGGCCGATGTGCATATCAACATTTATACATGGAACTGGAGAACATTGTGCCAATAATCATTTAATATATG CCAAATCTTACACGTCTACTCTAAACTGCTCTAATGAAGTTTCAGTGACCTTGAGGGCTAAAGATTGTTCTTCTG GGTAAGAGCTCTTGGGCTGGTTTTTCAGAGCAGAGTTCTTGTTGTGGGGTAGACTGTGACTAGGTTCACAGCCTTT GTGGAACATTCCGTATAACGGCATTGTGGAAGCAATAACTAGTTCCTATGAAAGAACCAGAGCTGGGAAGATGGC CACCTCTGGTGTTCAGAGGGGGCTTTTAAAAAAGCGTGTATGCTGGGATACCCATTAAAACCATTTCTAGAAGG CTACCATGAGCTGCACTTTTTGGGGTGGGAAAGGTGAATGCCAGTGGGGATGCGGGGGGATGAGGGTAGGAGGGA TATTCTAAGAGAAGTGCATGTGAAGAATGGTTGCCACTGTTATTAGATTGACAAGATGTTAATTTCTCTGTAGGT TGTAACTTTAAAAATAAATGAAATTATTTAAGGGTTATGCTGCACTAGTATTCCTTAGAGGAAACAGTTCTTTAA AGTTAGGAAAGGGAGTAGGCAGGCATGTGTTGGCAAAGGCTGTTAATAGTAGTTAAGTGTTAAGACTGCTTTTCT TTAACGTTTTCATGGTAATGCATATTTAGAGCACTGTATTTTTGTCTTGTTAAGAAAATTTAGCATTTCTAAAAG AAAAAAGCAACCCTCTTTCAAACTGTTAATTCTGTCACAGCCTGTATATTTTAGTCATTTGTAAATCTCTTCATA CAATAGTGACTTCTTTTTTGACTGATACAGTATCTTAATTACAAGGTTATTTTGTACTTGTCTTAATACACTAAG **TGTAATAAAAACGGCTTGAG**

MEQGLEEEEEVDPRIQGELEKLNQSTDDINRRETELEDARQKFRSVLVEATVKLDELVKKIGKAVEDSKPYWEAR RVARQAQLEAQKATQDFQRATEVLRAAKETISLAEQRLLEDDKRQFDSAWQEMLNHATQRVMEAEQTKTRSELVH KETAARYNAAMGRMRQLEKKLKRAINKSKPYFELKAKYYVQLEQLKKTVDDLQAKLTLAKGEYKMALKNLEMISD EIHERRRSSAMGPRGCGVGAEGSSTSVEDLPGSKPEPDAISVASEAFEDDSCSNFVSEDDSETQSVSSFSSGPTS PSEMPDQFPAVVRPGSLDLPSPVSLSEFGMMFPVLGPRSECSGASSPECEVERGDRAEGAENKTSDKANNNRGLS SSSGSGGSSKSQSSTSPEGQALENRMKQLSLQCSKGRDGIIADIKMVQIG

CATGGCAAAAGAACTCCCGGATAATCCGAATTCGTGGTCCTCAGAATTGGTTTAGGGTTGTTTCGCGGTTCTTCC CGTATTCTGCCTCCGAGGCCCAGTGGGGCTGGCTGTGGGGTGAGTGCGCCTGGCCCTAGCCCTGCAGCCCCCTGT GCTGTTTGAGGCGTGAAACTCACCTCAGGAAATGTATCTGATCCATTAGCGTGGATTCATATTATTTGGTGATGG AGAATCTTCAGCTGTGTTAAGTGTTACCGTCAGTTTCAGAGATGGCTTCTTTGCAAAGGAAAGGGCTGCAGGCAA GGATTCTCACCTCTGAAGAAGAGGAGAAACTGAAAAGAGACCAAACTTTGGTGTCTGATTTTAAACAGCAGAAAT GGACCACCAGAGAGTTTGAGGAGCTAAGATCATGTAGAGAGTTTGAAGATCAAAAGTTAACAATGCTTGAAGCTG GCTGTGGGGTTGGAAACTGTTTATTCCCACTTTTAGAAGAAGATCCGAATATCTTTGCCTATGCCTGTGATTTTT CTCCAAGAGCCATTGAATATGTTAAGCAAAATCCTTTATATGATACAGAAAGATGCAAGGTATTCCAGTGTGATC TGACTAAAGATGATCTTCTGGATCATGTACCGCCAGAGTCTGTGGATGTTGTTATGTTGATATTTTGTGCTGTCAG CTGTTCATCCTGATAAGATGCACCTTGTCTTACAAAACATTTACAAGGTATTAAAACCAGGCAAAAGTGTCTTGT TTCGTGACTACGGACTGTATGATCATGCCATGCTTAGGTTTAAAGCCAGCAGCAAACTTGGAGAAAACTTTTATG TTAGACAAGATGGGACCAGATCATATTTTTTTACTGATGACTTCCTGGCTCAGCTCTTTATGGACACAGGTTATG TTCAGAGCAAATTTCTAAAGCCTCCTAAGAACCCATCTCCTGTGGTCCTGGGCCTGGATCCTAAGTCCTGACCTT TCATGAGGTTGGCATTTATACCTTCCCTTGAAGAGGAAAATTTAAAATCACTCTTTCGTCTGGGTGCGGTGGCTC ATGCCTGTAATCCCAGCACTTCGGGAGGCCGAGGTTGGGGGATCATCTGAGGTCAGGAGTTTGAGACCAGCCTGG CCAACATGGTGAGACCCCATCTCTACTAAAAATACAAAAAATTAGCTGGGCATAGTGGCGAGTGCCTGTAATCC CAGCTACTCAGGAGGCTGAGGCAAGAGATCGCTTGAACCCAAGAGGCGGAGACTGCAGTGAGCCAAGATCATGC ATTTTTTGAGACAGGATCTTGTGGTACGCAGGCTGGAGTGCAGTGGTGTGTGATCACAGCTCATTGTAGCCTCGA CCTCCCCTGGGCTCAAGCAGTCTTCCTGCCTCAGCCTCCTGAGTAGCTAGGACTACAGGTGTAAGCCACCATGCC TGGCCCTTAATTTTTTTTAATGAGCATGTACAGTAGTCCCGCTTTATCCATGGTTTCACTTACCACAATTTCAAT TACCTGTTTTCAACTGCAGTCAGTTACTTTTCTTAAGATATTTTGAGGGTTATAGGCTCATGCCTATAACCCCAG CACTTTGAGAGGCCAAGGCCAGCAGATCCCTTGAGCCCAGGAGTTCAAGACCAGTGTGGGCAACATGGTGAAACT CTGTCTCTACAGAAAATACAAAAATTAGCCAAATGTGGTGGCATGTGCCTGTAGTCCCAG

MASLQRKGLQARILTSEEEEKLKRDQTLVSDFKQQKLEQEAQKNWDLFYKRNSTNFFKDRHWTTREFEELRSCRE FEDQKLTMLEAGCGVGNCLFPLLEEDPNIFAYACDFSPRAIEYVKQNPLYDTERCKVFQCDLTKDDLLDHVPPES VDVVMLIFVLSAVHPDKMHLVLQNIYKVLKPGKSVLFRDYGLYDHAMLRFKASSKLGENFYVRQDGTRSYFFTDD FLAQLFMDTGYEEVVNEYVFRETVNKKEGLCVPRVFLQSKFLKPPKNPSPVVLGLDPKS

FIGURE 1070A

GACAATGAAAAGCGAACCCCATTGCACGCCGCAGCTTACCTTGGAGATGCAGAAATCATTGAACTTCTTATTTTA TCTGGAGCTAGAGTTAATGCCAAAGACAGCAAATGGTTGACACCTTTACACAGAGCAGTTGCATCTTGTAGTGAG GAAGCAGTTCAGGTACTTTTGAAGCATTCTGCAGATGTTAATGCTCGAGACAAAAATTGGCAAACCCCTTTACAT ATAGCTGCTGCTAATAAAGCTGTAAAGTGTGCTGAAGCTTTGGTACCTCTTCTGAGTAATGTAAACGTATCTGAT CGAGCAGGGAGGACTGCATTACATCATGCAGCTTTCAGTGGACATGGTGAGATCGTCAAACTACTCTTGTCTAGA GGTGCCAATATTAATGCTTTTGACAAGAAAGATAGGCGTGCTATCCATTGGGCAGCATATATGGGTCACATTGAA GTAGTGAAATTGCTTGTGTCGCATGGAGCTGAAGTGACATGCAAGGATAAAAAGTCTTATACACCTCTTCATGCA GCTATTGTGAATCAAAAGAATGAAAAAGGATTTACTCCTTTGCACTTTGCTGCTGCATCAACACATGGAGCATTG TGTTTAGAGCTTCTAGTTGGCAATGGGGCCGATGTCAATATGAAGAGTAAAGATGGGAAAACCCCACTACACATG ACTGCTCTCCACGGTAGATTCTCCCGATCACAAACCATTATCCAGAGTGGAGCTGTAATCGACTGTGAGGATAAG AATGGAAATACCCCTTTGCACATAGCAGCACGGTATGGCCATGAGCTGCTGATCAACACTCTTATTACAAGTGGT GCTGACACTGCAAAGCGTGGCATACATGGAATGTTCCCCCTCCATTTGGCAGCCTTAAGCGGCTTTTCAGATTGC TGCAGAAAACTTCTTCAGGATTTGATATAGATACCCCAGATGATTTTGGCAGGACTTGTCTACATGCAGCT GCAGCTGGAGGGAATTTGGAGTGCCTAAACCTTCTGCTGAATACTGGTGCAGACTTTAATAAAAAGGACAAATTT GGGAGATCTCCACTGCACTACGCTGCCAACTGCAATTACCAGTGCCTGTTTGCTCTTGTGGGATCAGGAGCA AGTGTGAATGACCTTGATGAAAGAGGCTGCACACCCCTGCACTATGCAGCTACATCAGACACAGATGGCAAGTGC CTGGAATACTTATTAAGAAACGATGCAAATCCAGGGATCCGTGATAAGCAAGGATACAACGCAGTTCATTATTCA GCTGCTTATGGTCACCGTCTATGTCTTCAGCTGATTGCAAGTGAAACTCCTCTAGATGTTTTAATGGAAACCTCA GGAACAGACATGCTGAGTGATTCAGATAATAGAGCAACAATAAGCCCTTTACACTTGGCTGCCTATCATGGTCAC CATCAAGCACTGGAAGTGTTGGTACAGTCTTTGTTAGATCTTGATGTCAGAAATAGTAGTGGAAGAACACCCCTA GATCTTGCAGCTTTTAAGGGCCCATGTTGAATGTGTGGATGTACTCATTAATCAGGGAGCCTCAATCTTAGTAAAA GATTACATTTTGAAGAGGACACCTATTCATGCAGCAGCAACAAATGGTCATTCAGAATGCTTACGGCTATTAATA GGAAATGCAGAACCACAGAATGCAGTGGATATTCAAGATGGAAATGGACAGACGCCTCTGATGCTATCTGTTCTC AACGGGCACACAGACTGTGTTTACTCATTGCTGAACAAAGGAGCAAATGTAGATGCCAAAGATAAGTGGGGAAGG ACAGCGTTGCATAGAGGGCAGTTACAGGCCATGAAGAATGTGTAGATGCATTACTTCAACATGGTGCTAAGTGC TTACTTCGGGATAGCAGGGGCCGGACGCCTATACACCTGTCTGCTGCTGTGGACACATTGGTGTTCTTGGAGCC CTTTTGCAGTCAGCAGCATCTATGGATGCAAATCCAGCCACAGCAGACAATCATGGATATACGGCACTTCACTGG GCTTTTAGTCCATTGCATTGTGCCGTGATAAATGACAACGAAGGTGCTGCTGAGATGTTAATTGATACATTAGGT GCCAGCATTGTGAACGCCACAGATTCAAAAGGAAGAACTCCTCTCCATGCAGCCGCCTTCACAGACCATGTAGAG TGTTTACAGCTGCTGCTCAGCCATAATGCTCAAGTCAATTCTGTGGACTCTACAGGGAAAACACCTCTTATGATG GCTGCAGAAAATGGACAAACAAATACAGTTGAGATGCTGGTTAGCAGTGCTAGTGCAGAACTGACTTTACAAGAT AACAGTAAAAATACTGCCCTCCATTTGGCTTGTAGCAAGGGTCATGAAACTAGTGCCTTGTTAATACTGGAAAAG ATAACAGATAGAAACCTCATCAATGCAACCAACGCAGCCTTGCAAACACCTCTGCATGTTGCTGCCCGAAATGGG CTAACAATGGTGGTTCAGGAACTTTTGGGAAAAGGAGCAAGTGTGCTTGCAGTAGATGAAAATGGCTATACCCCA GCTTTGGCCTGTGCTCCCAATAAGGATGTGGCTGATTGCCTGGCTCTCATTTTGGCCACCATGATGCCTGTCTCA TCAAGTAGTCCTTTATCATCCTTAACATTCAATGCCATTAACCGTTATACCAACACCTCAAAAAACAGTCAGCTTT GAAGCTTTGCCCATCATGAGGAATGAACCTAGCTCCTATTGCAGTTTCAATAACATTGGAGGGGAACAGGAGTAC ${\tt TTATACACTGACGTGGATGAGCTCAACGACTCCGATTCTGAGACCTAC{\tt TGA}{\tt GAGGCTGAGGAGGAGGAGTTCTC}}$ ACAGTAAAGCTTCAAACTGTGCTTTTTCAGGAAAAAGGCACTTTGATATTCACGTAGAAATTCAACCTAAGAGGA AAGATCCCACAGTGAGCCAATGTTAAGAGATCTGATGGCATTAGGAGGAAGAGTTTTAAAGGCAAGTTTTACAAA AGGAACTTCTAGAATCTTGAAATAGACCTGACTGAGGAAAACACATTGATGTCAGAATTCTTTGTGGAATTGTTT AATTTGGTTTTGCAGTGCCAGGAACAATTGGGGACACTGTGCACTCTAACCTGCTTACACAAGCAACACTATTGT AACAGAAGAATAAAGACACTAGATTTAAATTTTATCAATAAAATTACAACTAAATTTAAAGGCAATAAAGTTT GGTACAGTAGGCATTATGTGCACAGCAAATTGCAAAAGGACCAAATAACTGAAAGGTTTTTTTAATAAAATGCCA TTTTGTGGAAACTGGAGTAGATTAAATGAAACATTACCTAAACCAAACTGCAATATTTCTGGAAATGAAGCTGAG

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FIGURE 1070B

TATACTATTAGAATTAAAAACCAGCTGACTGGGTGCAATACGGGTGAAAATACTTGTGACATAGACATTGAGATG GAATTTCCTAGAAAAAAATTCATGAAATCAAAAAGTAGACTATTTCACCCTATTGCAGCTAAGTGGTCCTGGGGC ${\tt ATGGAGTCTTCAACCTCTCTATGAATGGCACACCTTAGTCACTTATGTTACTTTTGTGTCCCCACCATGGGTTGG}$ GGGATTTTTTGTTTATTCTGATCTATGAGTTTTGAAAAAGTGAATAATCAAAAGGAAAATAATTCCTTGTTGTTC ATAAATTAAGCATCACTAAAGTCTCTTGAAAGGCATTTCTGTATTGGGCAAGATTTAAAATACTAAAGCCTTAGG GCTTTTACTGTAACTGTCACTTTCCCAGTGAAAATGATTTCATATACATTGAGGGTCTTACAGGTATGGGTAAAG TTCTATAAATTGCAACAAAATGATACCCAATTTCATTTTATCCTTTTTGTATTGTGAAACTGGAAACTTTATGAC ATTGTAAATTATCAGCTGGTTTTTCTGAATATAAAGTGTGAAAACACAGAACAGTATTTTGATCTATTTGATAAT $\tt TTTGTGGGTTTTTTGAAGAATTAATGAGCATGTACATAGAAATAGTGACTGCTTGAATACTGTATTTACTTGCAC$ TCTTTCAGTACATCAAGATTCCTGTATATTTTAGAGTATAATAAAACACAGATGTGAGTTGTATTTAATGAATAA TGTATTTGTATCTGTGCATATTATCTACAAATCTATAAAGTTTCTAGGGCATTGACTACTAGATTTTAAGCATTT TTTCTAAAATATTTACAGAAATTATAAATCTAATCCCCCATCTTTTCTTTATAATATAAAGAAGTCATAATGAAC $\tt CCTTCCTAATTATTAGTAGTAGGAAGGTGAATATGCATTTTAATGACAGTGGACTACATTTTCTATTGTACCTTT$ TGAAAAAAAAAAAAATCAAGCAGATTCTAAAAGTATACATATGTGTGCTTTCTCTTTTCCTTTTAGGAATTCTCTT $\tt CTGAATTCCCTGAGGGAATTTTCTAGAATCTCAGAATTGAAAGAGACCTGAGGTTCATCCAGTCTCTAACCTCTT$ AACAAATGCAGGAGTCCCTTCTACAAGGGTGATCTTTCCACCTTGAACACTTCCAAGTGACTCTACCTCACCAAG TAACTTCTGTCTTTGGGCCTGGGTCTGTCCTCCAAGAGAACCCTGAGAATGTTGGAAGGATGAATCTCGCACATT TATTAGATTTACCACATCTAATGAAATCCAAGGTGTAGCTATAAAGTGACAAGCTGTTTTTAATTTATCACATAC GCCACCCACTAAGAAAACTATTTCATTACTTTTGTAATCCATCTGTGAGAGTCTGCCCCCCAGCTTAACCACTT CCTTTGGTCTGCACCCAATGAAGGGAAACCCCAAAGTACTGTCTCAAATGGTATTTGAACTACG

i

MVKLLLSRGANINAFDKKDRRAIHWAAYMGHIEVVKLLVSHGAEVTCKDKKSYTPLHAAASSGMISVVKYLLDLG
VDMNEPNAYGNTPLHVACYNGQDVVVNELIDCGAIVNQKNEKGFTPLHFAAASTHGALCLELLVGNGADVNMKSK
DGKTPLHMTALHGRFSRSQTIIQSGAVIDCEDKNGNTPLHIAARYGHELLINTLITSGADTAKRGIHGMFPLHLA
ALSGFSDCCRKLLSSGFDIDTPDDFGRTCLHAAAAGGNLECLNLLLNTGADFNKKDKFGRSPLHYAAANCNYQCL
FALVGSGASVNDLDERGCTPLHYAATSDTDGKCLEYLLENDANPGIRDKQGYNAVHYSAAYGHRLCLQLIASETP
LDVLMETSGTDMLSDSDNRATISPLHLAAYHGHHQALEVLVQSLLDLDVRNSSGRTPLDLAAFKGHVECVDVLIN
QGASILVKDYILKRTPIHAAATNGHSECLRLLIGNAEPQNAVDIQDGNGQTPLMLSVLNGHTDCVYSLLNKGANV
DAKDKWGRTALHRGAVTGHEECVDALLQHGAKCLLRDSRGRTPIHLSAACGHIGVLGALLQSAASMDANPATADN
HGYTALHWACYNGHETCVELLLEQEVFQKTEGNAFSPLHCAVINDNEGAAEMLIDTLGASIVNATDSKGRTPLHA
AAFTDHVECLQLLLSHNAQVNSVDSTGKTPLMMAAENGQTNTVEMLVSSASAELTLQDNSKNTALHLACSKGHET
SALLILEKITDRNLINATNAALQTPLHVAARNGLTMVVQELLGKGASVLAVDENGYTPALACAPNKDVADCLALI
LATMMPVSSSSPLSSLTFNAINRYTNTSKTVSFEALPIMRNEPSSYCSFNNIGGEQEYLYTDVDELNDSDSETY

GGGCGGGCCCACCGCTCCAGCGGCTGTCAGGGGCCCGCGAGGCTTTCCCTGAAGATGCAGCGTAGCATATTTT ${\tt GCGCCTTCTCCTCCGCCGGTCCCATACGCTGCTGAA} \underline{{\tt ATG}} {\tt GGTTGCGGATTGAACAAGTTAGAGAAACGTGATGAA}$ $\tt CGCTTCCTGGAGTTCACGACTCTGAGTGCTGCGGAGCTCCCTGGGTCCTCAGCAGTGAGGCTGGCCTCCCTGCGT$ ACCCATGAGCGGGAGAAGACGCCCCTGGAGCACATCTTTAGAGCCATCCTGATCAAGAAAACCGACAGATCTCAG ${\tt AAAACTGATCTTCACAATGAAGGCTACATCTTGGAATTAGATTGCTGTTCCTCCTTAGACCACCCGACAGACCAG}$ AAACTCATCCCAGAGTTCATTAAGAAGATCCAGGAGGCTGCAAGCCAGGGCCTGAAATTCGTTGGTGTTATACCT CAGTACCATTCCTCTGTGAACTCGGCAGGCAGCAGTGCTCCGGTGTCTACTGCCAACAGCACCGAGGATGCCAGA GATGCAAAAAACGCACGTGGGGATCACGCGTCACTGGAGAATGAGAAACCGGGGACTGGGGATGTGTGCAGTGCT AACCCCTTGGAGGTGCATGAAGAGCCACTCTCAGGGAAAATGGAGATCTTCACCCTTTTCAACAAACCGAAGAGC CATCAGAAGTGCCGGCAATACTACCCTGTCACCATTCCTCTCCATGTCTCCAAGAATGGCCAGACAGTGAGCGGT TTGGACGCCAACTGGTTAGAGCACATGAGCGACCACTTCCGGAAAGGAGGCATGCTGGTGAACGCAGTCTTCTAC CTTGGAATAGTGAATGATTCCTTACATGGCTTGACAGATGGAGTATTCATCTTTGAAGCTGTTTCCACAGAAGAT AGCAAAACCATACAGGGCTATGATGCTATTGTGGTTGAACAATGGACAGTCCTGGAAGGTGTCGAAGTGCAGACA AAGACTACCAGCGAGGGGAGTGTATCCACCAAGCAGATTGTCTTCTTCAGAGACCTTGTCTACCTCAGAAAATC AAGAAGAAGGAATCGAAGTTTCAGTGGCGATTCTCCAGAGAAGAATGCACAACAGGCAGATGAGGAAATCAAAA GGTAAACTCAGTGCCAGAGACAACAACAAGCAGAAGAAATGAGAAGAACTTAGAAGACCAGTCTTCCAAAGCT GAGGACAAGGGAGAACAGCTGTCCCCTGGTGGCCTGCTGTGGGGGTGGGGTGGGAGGGTGAGGCTGTGCAGAAT GGTCCTGCCAGCCACAGCAGGGCCCTGGTGGGGATTTGCACTGGGCACTCCAATCCTGGAGAGGATGCCAGGGAC ${\tt GGGGATGCTGAGGAAGTCAGAGAGCTTGGTACGGTTGAAGAAAAC} \underline{{\tt TGA}}{\tt GTCTTGGGCAATTTGTGCTAAAACTAG}$ GTGAGTTGCCAAACCCAAGGCATCTTACCAACAGCTGGTTTGGGGGGCTGGTTTCCCTGGTGTTGTGTTACCTA ${\tt CCCTTTGGCTTGACCTCTCTTGTGAGCTCACCTGAGCCCTCCCAGGGCCAGGTTCCTGACAGTGTTGGT}$ TTTTGCACATCCACTGGAAAGGTGTCATTAATGACCCAGTGTTAGAATGCAAGAGGTCAGGTTATTCTAGCCCTC ACAGGGCCTCCAGGGAGCATTCGGGTCAAATCCATGGACACCCTGGGCTACAAACCAAGGCTGCTGTTCATCCCA CATCGTGTGGGGCAGTGTCCATCCCCTGCAGCTACTTGGTGACTTAACAACTCCAGGAGCCCTGTCAGCTGCCCT CCTCCACCTAAACCCCTTCGACTCTTCTGCTTTGACAAAGAAAATGACATTGGGGAGGGGAGGTGCTCCGCCTCC CAGCTTTTCTCAAAATAGTCCTATAGATACTGGTAATCTGGAAATGAAGTAATTCTGTCTCTGCACCTACTT TTGCAGAATGTTCAAGGAAGTATTCTGTGTTAGTATTAATGCCAAAAAGTTGTTTTTAAAGGTTTTGTACTCAGC AATCAGTGTAACATTGGTCAAGTTGTTACCCATGTATGCTGTGTTTATCATGTGTATATCGTCCAGAAAGTATTA AGGCTTTAGGTAGATGCAACTGGCGAACCTTGGAGAGGGAATGCTGATTGTCTTGACCAAACCCACAGCCTGTCT CTTCTCTTGTTTAGTTACTTACGGCAATAAATCATCTATGAGTT

MGCGLNKLEKRDEKRPGNIYSTLKRPQVETKIDVSYEYRFLEFTTLSAAELPGSSAVRLASLRDLPAQLLELYQQ GFSLAALHPFVQPTHEREKTPLEHIFRAILIKKTDRSQKTDLHNEGYILELDCCSSLDHPTDQKLIPEFIKKIQE AASQGLKFVGVIPQYHSSVNSAGSSAPVSTANSTEDARDAKNARGDHASLENEKPGTGDVCSAPAGRNQSPEPSS GPRGEVPLAKQPSSPSGEGDGGELSPQGVSKTLDGPESNPLEVHEEPLSGKMEIFTLFNKPKSHQKCRQYYPVTI PLHVSKNGQTVSGLDANWLEHMSDHFRKGGMLVNAVFYLGIVNDSLHGLTDGVFIFEAVSTEDSKTIQGYDAIVV EQWTVLEGVEVQTDYVPLLNSLAAYGWQLTCVLPTPVVKTTSEGSVSTKQIVFLQRPCLPQKIKKKESKFQWRFS REEMHNRQMRKSKGKLSARDKQQAEENEKNLEDQSSKAGDMGNCVSGQQQEGGVSEEMKGPVQEDKGEQLSPGGL LCGVGVEGEAVQNGPASHSRALVGICTGHSNPGEDARDGDAEEVRELGTVEEN

GCAATAGCACTAGAGTGCATCTATACCTGTGAACGAAATGATCAACTCTGTCTTTGCTATGACCTACTAGAATGT CTGCCAGAAAGAGGATATGGTGATAAGACAGAGGCAACCACAAAGCTTCATGACATGGTAGACCAACTGGAACAA ATTCTCAGTGTGTCAGAGCTTTTGGAAAAACATGGACTCGAGAAACCAATTTCATTTGTTAAAAAACACTCAATCT TCTCATTGGAGAACGTTGCTGCAAGACATGTTAACTATGCAGCAGAATGTATACACATGTCTAGATTCTGATGCC CACTGCAGTGCTTGTTCAGAAAATCCTCCAGCTGGTATAGCCCATAAAGGGAAACCCCACTACAGGGTCAGCTAC GAAAAGAGTATTGACTTGGTTTTGGCTGCCAGCAGAGAGTACTTCAATTCTTCTACCAACCTCACTGATAGCTGC ATGGATCTAGCCAGGTGCTGCTTACAACTGATAACAGACCAGACCCCCTGCCATTCAAGAGGAGCTAGATCTTATC CAAGCCGTTGGATGTCTTGAAGAATTTGGGGTAAAGATCCTGCCTTTGCAAGTGCGATTGTGCCCTGATCGGATC AGTCTCATCAAGGAGTGTATTTCCCAGTCCCCCACATGCTATAAACAATCCACCAAGCTTCTGGGCCTTGCTGAG $\tt CTGCTGAGGGTTGCAGGTGAGAACCCAGAAGAAGCGGGGGACAGGTTCTAATCCTTTTAGTGGAGCAGCACTTC$ GCTTCCATGACTACAAAGCAGCCAGTATGCATTGTCAGGAGCTGATGGCCACAGGTTATCCTAAAAGTTGGGATG TTTGTAGCCAGTTAGGACAATCAGAAGGTTACCAGGACTTGGCCACTCGTCAAGAGCTCATGGCTTTTGCTTTGA GAGTGAATTTCCAGATCCATCATGAAGGAGGGGAAAATATCAGTGCTTCACCATTAACTAGTAAAGCAGTACAAG TTTCCAACACCACAACCACCAAAGCGGTGCTGCAGGCCGTCAGTGATGGGCAGTGGTGGAAGAAGTCTTTAA AGAAACAAGGGTGTCATCCTTTTTATGAATCTGTCATCTCAAATCCTTTTGTCGCTGAGTCTGAAGGGACCTATG ACACCTATCAGCATGTTCCAGTGGAAAGCTTTGCAGAAGTATTGCTGAGAACTGGAAAATTGGCAGAGGCTAAAA ATAAAGGAGAAGTATTTCCAACAACTGAAGTTCTCTTGCAACTAGCAAGTGAAGCCTTGCCAAATGACATGACCT TGGCTCTTGCTTACCTTCTTGCCTTACCACAAGTGTTAGATGCTAACCGGTGCTTTGAAAAGCAGTCCCCCTCTG CATTATCTCTCCAGCTGGCAGCGTATTACTATAGCCTCCAGATCTATGCCCGATTGGCCCCATGTTTCAGGGACA ${\tt ACGAAGCCTGGACCTGATGACCTGACCAAGCAGTTACACTGCTACAATGAACGTCTCCTGGATTTCACAAGCAGCTGCTACAATGAACGTCTCCTGGATTTCACAAGCAGTTACACTGCTACAATGAACGTCTCCTGGATTTCACAAGCAGTTACACTGCTACAATGAACGTCTCCTGGATTTCACAAGCAGTTACACTGCTACAATGAACGTCTCCTGGATTTCACAAGCAGTTACAATGAACGTCTCCTGGATTTCACAAGCAGTTACAATGAACGTCTCCTGGATTTCACAAGCAGTTACAATGAACGTCTCCTGGATTTCACAAGCAGTTACAATGAACGTCTCCTGGATTTCACAAGCAGTTACAATGAACGTCTCCTGGATTTCACAAGCAGTTACAATGAACGTCTCCTGGATTTCACAAGCAGTTACAATGAACGTCTCCTGGATTTCACAAGCAGTTACAATGAACGTCTCCTGGATTTCACAAGCAGTTACAATGAACGTCTCCTGGATTTCACAAGCAGTTACAATGAACGTCTCCTGGATTTCACAAGCAGTTACAATGAACGTCTCCTGGATTTCAAATGAACGTCTCCTGGATTTCAAATGAACGTCTCCTGGATTTCAAATGAACGTCTCCTGGATTTCAAATGAACGTCTCCTGGATTTCAAATGAACGTCTCCTGGATTTCAAATGAACGTCTCCTGGATTTCAAATGAACAATGAACAATGAACAATGAACAATGAACAAATGAACAATGAACAATGAAATGAACAATGAAATGAAATGAAATGAACAATGAAATGAAATGAACAATGAAAATGAAAATGAAATGAAATGAAATGAAATGAAATGAAATGAAATGAAATGAAATGAAATGAAATGAAATGAAAATGAAATGAAATGAAATGAAATGAAATGAA$ CTCAGGCGCAGATCCTTCAGGGCCTTCGGAAGGGTGTGGACGTGCAGCGGTTTACTGCAGATGACCAGTATAAAA GGGAAACTATCCTTGGTCTGGCAGAAACTCTAGAGGAAAGCGTCTACAGCATTGCTATTTCTCTGGCACAACGTT ${\tt ACAGTGTCTCCCGCTGGGAAGTTTTTATGACCCATTTGGAGTTCCTCTTCACGGACAGTGGTTTGTCCACACTAG}$ AAATTGAAAATAGAGCCCAAGACCTTCATCTCTTTGAGACTTTGAAGACTGATCCAGAAGCCTTTCACCAGCACA TGGTCAAGTATATTTACCCTACTATTGGTGGCTTTGATCACGAAAGGCTGCAGTATTATTTCACTCTTCTGGAAA ACTGTGGCTGTGCAGATTTGGGGAACTGTGCCATTAAACCAGAAACCCACATTCGACTGCTGAAGAAGTTTAAGG TTGTTGCATCAGGTCTTAATTACAAAAAGCTGACAGATGAAAACATGAGTCCTCTTGAAGCATTGGAGCCAGTTC TTTCAAGTCAAAATATCTTGTCTATTTCCAAACTTGTTCCCAAAATCCCTGAAAAGGATGGACAGATGCTTTCCC CAAGCTCTCTGTACACCATCTGGTTACAGAAGTTGTTCTGGACTGGAGACCCTCATCTCATTAAACAAGTCCCAG GCTCTTCACCGGAGTGGCTTCATGCCTATGATGTCTGCATGAAGTACTTTGATCGTCTCCACCCAGGTGACCTCA CTAGAAAGGCTATTAAGACAGTCAAACATTTTATTGAGAAGCCAAGGAAAAGAAACTCAGAAGACGAAGCTCAAG AAGCTAAGGATTCTAAAGTTACCTATGCAGATACTTTGAATCATCTGGAGAAATCACTTGCCCACCTGGAAACCC TGAGCCACAGCTTCATCCTTTCTCTGAAGAATAGTGAGCAGGAAACACTGCAAAAATACAGTCACCTCTATGATC TGTCCCGATCAGAAAAAGAGAAACTTCATGATGAAGCTGTGGCTATTTGTTTAGATGGTCAGCCTCTAGCAATGA TTCAGCAGCTGCTAGAGGTGGCAGTTGGCCCTCTTGACATCTCACCCAAGGATATAGTGCAGAGTGCAATCATGA AAATAATTTCTGCATTGAG

CCTTTCCGTCTGGCGGCAGCCATCAGGTAAGCCAAG<u>ATC</u>GGTGCATACAAGTACATCCAGGAGCTATGGAGAAAG AAGCAGTCTGATGTCATGCGCTTTCTTCTGAGGGTCCGCTGCTGGCAGTACCGCCAGCTCTCTGCTCTCCACAGG ATTCGTGTTCGCCGTGGTGGCCGAAAACGCCCAGTTCCTAAGGGTGCAACTTACGGCAAGCCTGTCCATCATGGT AGAGTCCTGAATTCTTACTGGGTTGGTGAAGATTCCACATACAAATTTTTTGAGGTTATCCTCATTGATCCATTC CATAAAGCTATCAGAAGAAATCCTGACACCCAGTGGATCACCAAACCAGTCCACAAGCACAGGGAGATGCGTGGG CTGACATCTGCAGGCCGAAAGAGCCGTGGCCTTGGAAAGGGCCACAAGTTCCACCACACTATTGGTGGCTCTCGC ${\tt CGGGCAGCTTGGAGAAGGCGCAATACTCTCCAGCTCCACCGTTACCGC}$ TACTTAATAAACAATTTAGGACAGTCATGTCTGCTTACAGGTGTTATTTGTCTGTTAAAACTAGTCTGCAGATGT TTCTTGAATGCTTTGTCAAATTAAGAAAGTTAAAGTGCAATAATGTTTGAAGACAATAAGTGGTGGTGTATCTTG TTTCTAATAAGATAAACTTTTTTGTCTTTGCTTTATCTTATTAGGGAGTTGTATGTCAGTGTATAAAACATACTG TGTGGTATAACAGGCTTAATAAATTCTTTAAAAAGGAGAACTGAAACTAGCCCTGTAGATTTGTCTGGTGCATG GTTTGGCAGGTGTAGACTTTTTAAGTTGGGCTTTAGAAAATCTGGGTTAGCCTGAAGAAAATTGCCTCAGCCTCC ACAGTACCATTTTAAATTCACATAAAAGGTGAAAGCTCCTGGTTCAGTGCCATGGCTTCATGGCATTCAGTGATT AGTGGTAATGGTAAACACTGGTGTTTTTGAAGTTGAATGTGCGATAAAATTATTAGCCTTAAGATTGGTAAGCT AGCAATGAATGCTAGGGTGGGAAGCTGGTGAGCCAGTGGCCATTAGATAAATACCTTTCAAGTGTGAGCTTAGAC GTCAACCCTAAAATACTTAACCGTAATGCTAATTGTGATCATTATGAATCCCTTCAGTCACATTAGGGGGAAAGT AGTTGGCTATAAGTACGTCATTCTTAGTCCAGTCAGTCTTAAAAACATCTTGGGTTACCCACTCTGTCCACTCCC ATAGGCTACAGAAAAAGTCACAAGCGCATGGTTTCCAACCATATGTGTTTTCTGCAGTTATTTCTCTTGTTCTGG CCAAACAACCCTAAAAATCCTTACCATTCCACAAAGTTGGACCATCACTTGTGCACCCACTTTGACTATGAGTAT ACCACCACATTGCATTTCTGTTTGCACCATGTCTTCCAGGAGACTAGACTACTGTTGTCCAGGGTCAATTTGAGT GTAAAGAAATGTAGACAAGGAATTGCCCAATTTTAAATTCTGACTTTGCTGACTTAATTTAAATGCTCGTTCTG AACCAATTTTCTCCTATCTTCTCTAGGGGTTTCAAAAGACTCAGTTAATTGATTTCCAGGAAGTACTCATAGCAA GTTCATAAAAGTTCTTGAGACCTAAATTTCTTCACAAAAAAAGAAAAGATCTTAAGTCATACATTTTAATTGTGT

 $\label{thm:mgaykyiqelwrkkqsdvmrfllrvrcwqyrqlsalhraprptrpdkarrlgykakqgyviyrirvrrggrkrpv\\ pkgatygkpvhhgvnqlkfarslqsvaeeragrhcgalrvlnsywvgedstykffevilidpfhkairrnpdtqw\\ itkpvhkhremrgltsagrksrglgkghkfhhtiggsrraawrrntlqlhryr$

GTGACAGAAGTAGTAGGAAGTGAGCTGTTCAGAGGCAGGAGGGTCTATTCTTTGCCAAAGGGGGGACCAGAATTC GGGTAGGATCCGGAACGCATTCGGAAGGCTTTTTGCAAGCATTTACTTGGAAGGAGAACTTGGGATCTTTCTGGG AACCCCCGCCCGGCTGGATTGGCCGAGCAAGCCTGGAAAATGGTAAATGATCATTTGGATCAATTACAGGCTT TTAGCTGGCTTGTCTGTCATAATTCATGATTCGGGGCTGGGAAAAAGACCAACAGCCTACGTGCCAAAAAAAGGGG ATTCAGTGCAAGGGAGATCATGTTTGACTGTATGGATGTTCTGTCAGTGAGTCCTGGGCAAATCCTGGATTTCTA CACTGCGAGTCCGTCTTCCTGCATGCTCCAGGAGAAAGCTCTCAAAGCATGCTTCAGTGGATTGACCCAAACCGA ATGGCAGCATCGGCACACTGCTCAATCAATTGAAACACAGAGCACCAGCTCTGAGGAACTCGTCCCAAGCCCCCC ATCTCCACTTCCTCCCCCTCGAGTGTACAAACCCTGCTTCGTCTGCCAGGACAAATCATCAGGGTACCACTATGG GGTCAGCGCCTGTGAGGGATGTAAGGGCTTTTTCCGCAGAAGTATTCAGAAGAATATGATTTACACTTGTCACCG AGATAAGAACTGTGTTATTAATAAAGTCACCAGGAATCGATGCCAATACTGTCGACTCCAGAAGTGCTTTGAAGT GGGAATGTCCAAAGAATCTGTCAGGAATGACAGGAACAAGAAAAAGAAGGAGACTTCGAAGCAAGAATGCACAGA GAGCTATGAAATGACAGCTGAGTTGGACGATCTCACAGAGAAGATCCGAAAAGCTCACCAGGAAACTTTCCCTTC ACTCTGCCAGCTGGGTAAATACACCACGAATTCCAGTGCTGACCATCGAGTCCGACTGGACCTGGGCCTCTGGGA CAAATTCAGTGAACTGGCCACCAAGTGCATTATTAAGATCGTGGAGTTTGCTAAACGTCTGCCTGGTTTCACTGG GTATACCCCAGAACAAGACACCATGACTTTCTCAGACGGCCTTACCCTAAATCGAACTCAGATGCACAATGCTGG ATTTGGTCCTCTGACTGACCTTGTGTTCACCTTTGCCAACCAGCTCCTGCCTTTGGAAATGGATGACACAGAAAC AGGCCTTCTCAGTGCCATCTGCTTAATCTGTGGAGACCGCCAGGACCTTGAGGAACCGACAAAAGTAGATAAGCT ACAAGAACCATTGCTGGAAGCACTAAAAATTTATATCAGAAAAAGACGACCCAGCAAGCCTCACATGTTTCCAAA GATCTTAATGAAAATCACAGATCTCCGTAGCATCAGTGCTAAAGGTGCAGAGCGTGTAATTACCTTGAAAATGGA AATICCTGGATCAATGCCACCTCTCATTCAAGAAATGCTGGAGAATTCTGAAGGACATGAACCCTTGACCCCAAG ACCACTCGTGCAATAAGACATTTCTAGCTACTTCAAACATTCCCCAGTACCTTCAGTTCCAGGATTTAAAATGC AAGAAAAACATTTTTACTGCTGCTTAGTTTTTGGACTGAAAAGATATTAAAACTCAAGAAGGACCAAGAAGTTT TCATATGTATCAATATATATACTCCTCACTGTGTAACTTACCTAGAAATACAAACTTTTCCAATTTTAAAAAAATC AGCCATTTCATGCAACCAGAAACTAGTTAAAAGCTTCTATTTTCCTCTTTGAACACTCAAGATTGCATGGCAAAG TATACTGTATGTTTGGTGCTTTCCTTTTGTCTTGCATACTCAAAATAACCATGACACCAAGGTTATGAAATAGAC TACTGTACACGTCTACCTAGGTTCAAAAAGATAACTGTCTTGCTTTCATGGAATAGTCAAGACATCAAGGTAAGG AAGCTTGTCTTTGCTCTTTCTGATGCTCTCAAACTGCATCTTTTATTTCATGTTGCCCAGTAAAAGTATACAAAT TCCCTGCACTAGCAGAAGAGAATTCTGTATCAGTGTAACTGCCAGTTCAGTTAATCAAATGTCATTTGTTCAATT TTTTTACAGTAATGATAGCCTCCAAGGCAGAAACACTTTTCAGTGTTAAGTTTTTGTTTACTTGTTCACAAGCCA AAACAGGCATAGAATCTGCCTCCTTTGACCTTGTTCAATCACTATGAAGCAGAGTGAAAGCTGTGGTAGAGTGGT CTGTTTACCTTTTTCCATGGAGTCTCCTGGCAAAGAATAAAATATATTTTTT

1157/6881 FIGURE 1079A

<u>ATG</u>GCCAAGTCGGGTGGCTGCGGCGGGGAGCCGGCGTGGGCGGCGCAACGGGGCACTGACCTGGGTGAACAAT GCTGCAAAAAAAGAAGATCAGAAAACTGCCAACAAAAATGATTCTTCAAAGAAGTTGTCTGTTGAGAGAGTGTAT CAGAAGAAGACACATTGAACACATTCTTCTTCGTCCTGATACATATATTGGGTCAGTGGAGCCATTGACGCAG TTCATGTGGGTGTATGATGAAGATGTAGGAATGAATTGCAGGGAGGTTACCTTTGTGCCAGGTTTATACAAGATC TTTGATGAAATTTTGGTTAATGCTGCTGACAATAAACAGAGGGATAAGAACATGACTTGTATTAAAGTTTCTATT GATCCTGAATCTAACATTATAAGCATTTGGAATAATGGGAAAGGCATTCCAGTAGTAGAACACAAGGTAGAAAAA GTTTATGTTCCTGCTTTAATTTTTGGACAGCTTTTAACATCCAGTAACTATGATGATGATGAGAAAAAAAGTTACA GGTGGTCGTAATGGTTATGGTGCAAAACTTTGTAATATTTTCAGTACAAAGTTTACAGTAGAAACAGCTTGCAAA GAATACAAACACAGTTTTAAGCAGACATGGATGAATAATATGATGAAGACTTCTGAAGCCAAAATTAAACATTTT GATGGTGAAGATTACACATGCATAACATTCCAACCAGATCTGTCCAAATTTAAGATGGAAAAACTTGACAAGGAT ATTGTGGCCCTCATGACTAGAAGGGCATATGATTTGGCTGGTTCGTGTAGAGGGGGTCAAGGTCATGTTTAATGGA AAGAAATTGCCTGTAAATGGATTTCGCAGTTATGTAGATCTTTATGTGAAAGACAAATTGGATGAAACTGGGGTG GCCCTGAAAGTTATTCATGAGCTTGCAAATGAAAGATGGGATGTTTGTCTCACATTGAGTGAAAAAGGATTCCAG CAAATCAGCTTTGTAAATAGTATTGCAACTACAAAAGGTGGACGGCACGTGGATTATGTGGTAGATCAAGTTGTT GGTAAACTGATTGAAGTAGTTAAGAAAAAGAACAAAGCTGGTGTATCAGTGAAACCATTTCAAGTAAAAAACCAT ATATGGGTTTTTATTAATTGCCTTATTGAAAATCCAACTTTTGATTCTCAGACTAAGGAAAACATGACTCTGCAG CCCAAAAGTTTTGGGTCTAAATGCCAGCTGTCAGAAAAATTTTTTAAAGCAGCCTCTAATTGTGGCATTGTAGAA AGTATCCTGAACTGGGTGAAATTTAAGGCTCAGACTCAGCTGAATAAGAAGTGTTCATCAGTAAAATACAGTAAA ATCAAAGGTATTCCCAAACTGGATGATGCTAATGATGCTGGTGGTAAACATTCCCTGGAGTGTACACTGATATTA ACAGAGGGAGACTCTGCCAAATCACTGGCTGTGTCTGGATTAGGTGTGATTGGACGAGACAGATACGGAGTTTTT ATTATTAAAATAGTTGGTCTACAATATAAGAAAAGTTACGATGATGCAGAATCTCTGAAAACCTTACGCTATGGA CAGGAACTTTCCTTCTACAGTATTCCTGAATTTGACGAATGGAAAAACATATAGAAAACCAGAAAGCCTGGAAA ATAAAGTACTATAAAGGATTGGGTACTAGTACAGCTAAAGAAGCAAAGGAATATTTTGCTGATATGGAAAGGCAT GACAGAAAAGAATGGTTAACAAATTTTATGGAAGACCGGAGACAGCGTAGGCTACATGGCTTACCAGAGCAATTT GGAGAACAAGCATTGATGATGACTATTGTGAATTTGGCTCAGAACTTTGTGGGAAGTAACAACATTAACTTGCTT CAGCCTATTGGTCAGTTTGGAACTCGGCTTCATGGTGGCAAAGATGCTGCAAGCCCTCGTTATATTTTCACAATG TTAAGCACTTTAGCAAGGCTACTTTTTCCTGCTGTGGATGACAACCTCCTTAAGTTCCTTTATGATGATAATCAA CGTGTAGAGCCTGAGTGGTATATTCCTATAATTCCCATGGTTTTAATAAATGGTGCTGAGGGCATTGGTACTGGA TGGGCTTGTAAACTACCCAACTATGATGCTAGGGAAATTGTGAACAATGTCAGACGAATGCTAGATGGCCTGGAT CCTCATCCCATGCTTCCAAACTACAAAAACTTTAAAGGCACGATTCAAGAACTTGGTCAAAAACCAGTATGCAGTC AGTGGTGAAATATTTGTAGTGGACAGAAACACAGTAGAAATTACAGAGCTTCCAGTTAGAACTTGGACACAGGTA TATAAAGAACAGGTTTTAGAACCTATGCTAAATGGAACAGATAAAACACCAGCATTAATTTCTGATTATAAAGAA TATCATACTGACACACTGTGAAATTTGTGGTGAAAATGACTGAAGAGAAACTAGCACAAGCAGAAGCTGCTGGA CTGCATAAAGTTTTTAAACTTCAAACTACTCTTACTTGTAATTCCATGGTACTTTTTGATCATATGGGATGTCTG AAGAAATATGAAACTGTGCAAGACATTCTGAAAGAATTCTTTGATTTACGATTAAGTTATTACGGTTTACGTAAG GAGTGGCTTGTGGGAATGTTGGGAGCAGAATCTACAAAGCTTAACAATCAAGCCCGTTTCATTTTAGAGAAGATA CAAGGGAAAATTACTATAGAGAATAGGTCAAAGAAAGATTTGATTCAAATGTTAGTCCAGAGAGGGTTATGAATCT AGTTCCTCCGATTCAGGAACTCCTTCAGGCCCAGATTTTAATTATATTTTAAATATGTCTCTGTGGTCTCTTACT AAAGAAAAAGTTGAAGAACTGATTAAACAGAGAGATGCAAAAAGGGCGAGAGGTCAATGATCTTAAAAAGAAAATCT CCTTCAGATCTTTGGAAAGAGGATTTAGCGGCATTTGTTGAAGAACTGGATAAAGTGGAATCTCAAGAACGAGAA

FIGURE 1079B

GATGTTCTGGCTGGAATGTCTGGAAAAGCAATTAAAGGTAAAGTTGGCAAACCTAAGGTGAAGAAACTCCAGTTG GAAGAGACAATGCCCTCACCTTATGGCAGAAGAATAATTCCTGAAATTACAGCTATGAAGGCAGATGCCAGCAAA AAGTTGCTGAAGAAGAAGAAGGGTGATCTTGATACTGCAGCAGTAAAAGTGGAATTTGATGAAGAATTCAGTGGA AAACGGAATCCTTGGTCAGATGATGAATCCAAGTCAGAAAGTGATTTGGAAGAAACAGAACCTGTGGTTATTCCA AGAGATTCTTTGCTTAGGAGAGCAGCCGAAAGACCTAAATACACATTTGATTTCTCAGAAGAAGAGATGAT GATGCTGATGATGATGATGACAATAATGATTTAGAGGAATTGAAAGCTTAAAGCATCTCCCATAACAAATGAT GGGGAAGATGAATTTGTTCCTTCAGATGGGTTAGATAAAGATGAATATACATTTTCACCAGGCAAATCAAAAGCC ACTCCAGAAAAATCTTTGCATGACAAAAAAAGTCAGGATTTTGGAAATCTCTTCTCATTTCCTTCATATTCTCAG AAGTCAGAAGATGATTCAGCTAAATTTGACAGTAATGAAGAAGATTCTGCTTCTGTTTTTTCACCATCATTTGGT CTGAAACAGACAGATAAAGTTCCAAGTAAAACGGTAGCTGCTAAAAAAGGGAAAACCGTCTTCAGATACAGTCCCT AAGCCCAAGAGAGCCCCAAAACAGAAGAAAGTAGTAGAGGCTGTAAACTCTGACTCGGATTCAGAATTTGGCATT CCAAAGAAGACTACAACACCAAAAGGTAAAGGCCGAGGGGCAAAGAAAAGGAAAGCATCTGGCTCTGAAAATGAA TCAGATGTGGACATCTTCCCCTCAGACTTCCCTACTGAGCCACCTTCTCTGCCACGAACCGGTCGGGCTAGGAAA ${\tt GAAGTAAAATATTTTGCAGAGTCTGATGAAGAAGAAGATGATGTTGATTTTGCAATGTTTAAT} {\tt TAAGTGCCCAAA}$ GAGCACAAACATTTTTCAACAAATATCTTGTGTTGTCCTTTTGTCTTCTCTGTCTCAGACTTTTGTACATCTGGC TTATTTTAATGTGATGATGTAATTGACGGTTTTTTATTATTGTGGTAGGCCTTTTAACATTTTGTTCTTACACAT ACAGTTTTATGCTCTTTTTTACTCATTGAAATGTCACGTACTGTCTGATTGGCTTGTAGAATTGTTATAGACTGC CGTGCATTAGCACAGATTTTAATTGTCATGGTTACAAACTACAGACCTGCTTTTTGAAATGAAATTTAAACATTA AAAATGGAACTGTG

MAKSGGCGAGAGVGGGNGALTWVNNAAKKEESETANKNDSSKKLSVERVYQKKTQLEHILLRPDTYIGSVEPLTQ FMWVYDEDVGMNCREVTFVPGLYKIFDEILVNAADNKQRDKNMTCIKVSIDPESNIISIWNNGKGIPVVEHKVEK VYVPALIFGQLLTSSNYDDDEKKVTGGRNGYGAKLCNIFSTKFTVETACKEYKHSFKQTWMNNMMKTSEAKIKHF DGEDYTCITFQPDLSKFKMEKLDKDIVALMTRRAYDLAGSCRGVKVMFNGKKLPVNGFRSYVDLYVKDKLDETGV ALKVIHELANERWDVCLTLSEKGFQQISFVNSIATTKGGRHVDYVVDQVVGKLIEVVKKKNKAGVSVKPFQVKNH IWVFINCLIENPTFDSQTKENMTLQPKSFGSKCQLSEKFFKAASNCGIVESILNWVKFKAQTQLNKKCSSVKYSK IKGIPKLDDANDAGGKHSLECTLILTEGDSAKSLAVSGLGVIGRDRYGVFPLRGKILNVREASHKQIMENAEINN IIKIVGLQYKKSYDDAESLKTLRYGKIMIMTDQDQDGSHIKGLLINFIHHNWPSLLKHGFLEEFITPIVKASKNK QELSFYSIPEFDEWKKHIENQKAWKIKYYKGLGTSTAKEAKEYFADMERHRILFRYAGPEDDAAITLAFSKKKKID DRKEWLTNFMEDRRQRRLHGLPEQFLYGTATKHLTYNDFINKELILFSNSDNERSIPSLVDGFKPGQRKVLFTCF $\tt KRNDKREVKVAQLAGSVAEMSAYHHGEQALMMTIVNLAQNFVGSNNINLLQPIGQFGTRLHGGKDAASPRYIFTM$ LSTLARLLFPAVDDNLLKFLYDDNORVEPEWYIPIIPMVLINGAEGIGTGWACKLPNYDAREIVNNVRRMLDGLD PHPMLPNYKNFKGTIQELGQNQYAVSGEIFVVDRNTVEITELPVRTWTQVYKEQVLEPMLNGTDKTPALISDYKE EWLVGMLGAESTKLNNQARFILEKIQGKITIENRSKKDLIQMLVQRGYESDPVKAWKEAQEKAAEEDETQNQHDD SSSDSGTPSGPDFNYILNMSLWSLTKEKVEELIKQRDAKGREVNDLKRKSPSDLWKEDLAAFVEELDKVESQERE DVLAGMSGKA1KGKVGKPKVKKLOLEETMPSPYGRRIIPEITAMKADASKKLLKKKKGDLDTAAVKVEFDEEFSG APVEGAGEEALTPSVPINKGPKPKREKKEPGTRVRKTPTSSGKPSAKKVKKRNPWSDDESKSESDLEETEPVVIP TPEKSLHDKKSODFGNLFSFPSYSOKSEDDSAKFDSNEEDSASVFSPSFGLKQTDKVPSKTVAAKKGKPSSDTVP $\tt KPKRAPKQKKVVEAVNSDSDSEFGIPKKTTTPKGKGRGAKKRKASGSENEGDYNPGRKTSKTTSKKPKKTSFDQD$ SDVDIFPSDFPTEPPSLPRTGRARKEVKYFAESDEEEDDVDFAMFN

GAGAAGGCCCAGGAAGTGACGGCCGCCTCCCGGCTACCGGGGACTTCTGGAGTCCGAGAAGTCAACGGCGCGCTT GCTGCGGCCGCCGCCCCCGGCCCGAGGCGATGGAGAACGGAGCGGTGTACAGCCCCACTACGGAGGAGGACC CGGGCCCGCCAGAGGCCCCCGGAGCGGCCTCGCTGCCTACTTTTTCATGGGCCGGCTCCCATTGCTCCGGCGCG TTCTCAAGGGCTTGCAGCTGTTGCTGTCTCTGCTGGCCTTCATCTGTGAAGAAGTTGTATCACAATGTACTTTAT GTGGAGGACTTTATTTTTTTGAGTTTGTAAGCTGCAGTGCCTTTCTTCTGAGTCTCCTTATACTGATTGTGTATT GCACTCCATTTTATGAGAGAGTTGATACCACAAAAGTAAAATCATCGGATTTTTATATTACTTTGGGAACAGGAT GTGTGTTTTTGTTGGCATCCATCATTTTTGTTTCCACACATGACAGGACTTCAGCTGAGATTGCTGCAATTGTGT TTGGATTTATAGCAAGTTTTATGTTCCTACTTGACTTTATCACTATGCTGTATGAAAAACGACAGGAGTCCCAGC ${\tt TGAGAAAACCTGAAAATACCACTAGGGCTGAAGCCCTCACTGAGCCACTTAATGCC} {\color{red}{\bf TAA}} {\tt AGACTCTGGGGAGCAGCAGCTGAGCCACTTAATGCC} {\color{red}{\bf TAA}} {\color{red$ ATGTTACCTAAGGTAGTGACCCTGCATTGTGGTGCCTGAGCCCTGGCAGAAGCTCTTGTAAAATTTGTTAATTGT GTAGGCCAGATAAGTTAAAAAAATTTTTTTTTAAATAATAATTGAAACTTATCTCAAATGGAGATTTTGGTGGG AGGAGGAGAAAACAATTGTTTTTAAATCACACAGCTCAACGGTTGATAAATGATTCTGTCATTCTGTTACAGGTC ATTCTTTTACTAGGCTTAGCTTCCAAATTATGCTTTATAGCTGTATAAACATCGTGATTATATTCATCTACTTAG TAACATATTTAAGAAACCAATATTTAAAATGTTGGTCTAGGTTTTTTTCCTTAACATATATTACCAGGCTTTACT GTATTTCACTCAGCCTTAAATGTTATAATATTTTTGGATAACGGTTATTAATTCTTTGAGACCTTCGTATAGCCT ATAAAATGTATGGGAGATGTTGGTATTTATGTGTATAAAAGCAACAATATCAGCAACTTCGTGTTTATACTGCA CCTTGGTTGTTGATGTCAAGTAAAAAAAAAAGATTGTTTTGTAACACATAAAAAAATGGAAGAAACTGATACCACAC CTAAGGACCAAAGATAAGAAAGACTTTTTGCCCAAGACAGTGAAAGTAATTATAAAAACAAGCTTTGACCACTTA CCAAGTATCTGAAGAGATGAGTTCATACTATGATTTAGAAAGTGGTTCGATTCCCCTGTTGGCATATGATTATTT AGCCTTTGGTTTTCATCTGTTCGAGATGCCTCTTCTCTGTCTCCTTATCAGATAGAAATGGAGTCATGTGCTGC TGCTTCATCTAGCAGAGGTTGGCCTCTGGCTCTGACACTTTTTGTCAGTTGTCTTTAGGTGGTCCTGAATCTTGG GCCCTTTTGATTGTGAATACTGTGTAGCAGGATCTTGAGAGTCCTTGTTCTTACATAGGCATTGCTCTAGTTTGT CTTTGGCAAAAAAAAAAAAAAAAAAAAAA

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MENGAVYSPTTEEDPGPARGPRSGLAAYFFMGRLPLLRRVLKGLQLLLSLLAFICEEVVSQCTLCGGLYFFEFVS CSAFLLSLLILIVYCTPFYERVDTTKVKSSDFYITLGTGCVFLLASIIFVSTHDRTSAEIAAIVFGFIASFMFLL DFITMLYEKRQESQLRKPENTTRAEALTEPLNA

 ${\tt MDAVCYGEAVSSQQQGEKKEKRKHKKKCVVQSLNSYFMDVKCPGCYKITTAVSNSCNFPLNGSPDVATDYGAVHGSSAGAGHRHQEALFNSVSAFPLHAPSGEARQMEKALADSVGMFPSPQAAEQQCRCQHQQAEVASSF}$

GCTAAAGGTGATGTGGCCGCCCTCAACCGACGCATCCAGCTCGTTGAGGAGAAGTTGGACAGGGCTCAGGAAAGA CTGGCCACGGCCCCGCAGAAGCTGGAGGAGGCAGAAAAAGCTGCAGATGAGAGTGAGAGGAATGAAGGTGATA GAAAACCGGGCCATGAAGGATGAGGAGAAGATGGAAATTCAGGAGCTGCAGCTCAAAGAGGCCCAAGCACATTGCG GAAGAGGCTGACCGCAAATACTGGGAGGTAGCTCGTAAGCTGGTCTTCCTGGAGGGTGAGCTGGAGAGGGCAGAG GAGCGTGTGGAGGTGTCTGAACTAAAATGTGGTGACCTTGAAGAAGAACTCAAGAATGTTACTAACAATCTGAAA TCTCTGGAGGCTGCGTCTGAAAAGTATTCTGAAAAGGAGGACAAATGTGAAGAAGAAATTAAACTTCTGTGTGAC AAACTGAAAGAGGCTGAGACCCGTGCTGAATTTGCAGAGAGAACGGTTGCAAAACTGGAAAAGACAATTGATGAC CTGGAAGAAACTTGCCCAGGCCAAAGAAGAAGAGACGTGGGCTTACATCAGACACTGGATCAGACACTAAACGAG CTTAACTGTATATAAGCAAAACAGAAGAGTCTTGTTCCAACAGAAACTCCGGAGCTCCGTGGGTCTTTCTCTTCT CTTGTAAGAAGTTCCTTTTGTTATTGCCATCTTCGCTTTGCTGGAAATGTCAAGCAAATTATGAATACATGACCA TTTTTCAGCTCTCTTATTTTTCCTTAAGTTGCATTTATTCCTAAGGTAGGCAGGGTATTTCCTAGTAAGCATAG TTTCTTAAGACAGAGGCCATTTGGTTCCTGGGAGAATAGGCAGCCCCACACTTTGAAGAACACAGACCCCAGTAT CTAGTCGTGGATATGATTAAAACGCTGAAGACCACAACCTTTTGGGTCAAACTGTTGGTCAAACTATAGGAGAGAC CAGGGACCACCCCACTCCTATTTATTCAGCACCACACTACCCAGGAAATACACTAGCAAATTGTGCAATGGAATA AAATCCACACTTTACTTTAGATTCTTGCAACTGTATCATATGTAATAGTATCACTTTTTCTACATTTTGGTCAAA TAAATTTTTACATAAACTAC

TGGGTCTCGCGCGCGTATTGCTGGGTAACGGGCCTTCTCCCGCGTCGGCCCGGCCCCTCCTGCCTCGGCTCGTCC TGTCATGGATGCACTGGTAGAAGATGATATCTGTATTCTGAATCATGAAAAAGCCCCATAAGAGAGATACAGTGAC CCCAGTTTCAATATATCAGGAGATGAATCTGTTGCTTCCCATTTTGCTCTTGTCACTGCATATGAAGACATCAA AAAACGACTTAAGGATTCAGAGAAAGAGAACTCTTTGTTAAAGAAGAGAATAAGATTTTTGGAAGAAAAGCTAAT AGCTCGATTTGAAGAAGAAACAAGTTCCGTGGGACGAGAACAAGTAAATAAGGCCTATCATGCATATCGAGAGGT TTGCATTGATAGAGATAATTTGAAGAGCAAACTGGACAAATGAATAAAGACAACTCTGAATCTTTGAAAGTATT GAATGAGCAGCTACAATCTAAAGAAGTAGAACTCCTCCAGCTGAGGACAGAGGTGGAAACTCAGCAGGTGATGAG GAATTTAAATCCACCTTCATCAAACTGGGAGGTGGAAAAGTTGAGCTGTGACCTGAAGATCCATGGTTTGGAACA GGAACTGAAGAGAGAAATGTCTAATTTACATCTGGTGACTCAAGTACAAGCTGAACTACTAAGAAAACTGAAAAC CTCAACTGCAATCAAGAAAGCCTGTGCCCCTGTAGGATGCAGTGAAGACCTTGGAAGAGACAGCACAAAACTGCA CTTGATGAATTTTACTGCAACATACACAAGACATCCCCCTCTCTTACCAAATGGCAAAGCTCTTTGTCATACCAC ATCCATTCCTAATGATGGTACATGCTTTCAGGAACACAGTTCTTATGGCAGAAATTCTCTGGAAGACAATTCCTG GGTATTTCCAAGTCCTCCTAAATCAAGTGAGACAGCATTTGGGGAAACTAAAACTAAAACTTTGCCTTTACCCAA $\tt CCTTCCACCACTGCATTACTTGGATCAACATAATCAGAACTGCCTTTATAAGAAT\underline{TAA}{\tt TTTGGAAGAGATTCACG}$ ATTTCACCATGAGGACACTTATCTCTTTCAGTGGTCCTCCCAAGAAATTATTTAACAAACTGAAAGGAGATTTTG ATTAAAATTTTGCAGAGGTCTTCAGTATCTATATTTGAACACACTGTACAATAGTACAAAAACCAACATAGTTGG TAAACTTAAGGTGTTTAAAAAACTCTGCCTTCTATATTAATTGTAAAATTTTGCCTCTCAGAAGAATGGAATTGG AGATTGTAGACGTGGTTTTACAAAATGTGAAATGTCTAAATATCTGTTCATAAAAATAAAAGGAAAACATGTTTC TTCAAATTGCATAATGGAACAAATGGCAATGTGAGTAGGTTACATTTCTGTTGTTATAATGCGTAAAGATATTGA AAATATAATGAAATAAAAGCATCTTAGGTTATACCATCTTTATATGCTATTGCGTTTCAATATTTAAGATTTAAA GTGATTTTTTGGTCACAGTGTTTTGTTGATAAAATTTTTTTAGAATTGAAGTTTGAATTCTAAGACTTGAAACAA

MDALVEDDICILNHEKAHKRDTVTPVSIYSGDESVASHFALVTAYEDIKKRLKDSEKENSLLKKRIRFLEEKLIA RFEEETSSVGREQVNKAYHAYREVCIDRDNLKSKLDKMNKDNSESLKVLNEQLQSKEVELLQLRTEVETQQVMRN LNPPSSNWEVEKLSCDLKIHGLEQELELMRKECSDLKIELQKAKQTDPYQEDNLKSRDLQKLSISSDNMQHAYWE LKREMSNLHLVTQVQAELLRKLKTSTAIKKACAPVGCSEDLGRDSTKLHLMNFTATYTRHPPLLPNGKALCHTTS SPLPGDVKVLSEKAILQSWTDNERSIPNDGTCFQEHSSYGRNSLEDNSWVFPSPPKSSETAFGETKTKTLPLPNL PPLHYLDQHNQNCLYKN

GCGATGGAGCCGGGGCCCCGGGGGCCCCCGCGCGCTGCTGCGCGTGCGCCTGCGCGCGCGCGCGGG CGCGCCCAATACGAACGCTACAGCTTCCGCAGCTTCCCACGGGACGAGCTGATGCCGCTCGAGTCGGCCTACCGG CACGCGCTGGACAAGTACAGCGGCGAGCACTGGGCCGAGAGCGTGGGCTACCTGGAGATCAGCCTGCGGCTGCAC CTCGCCAGCTATCCCGAGCTGCGCCTCTTCGGGGGCCTGCTGCGCCGCGCGCACTGCCTCAAGCGCTGCAAGCAG GGCCTGCCAGCCTTCCGCCAGTCCCAGCCCAGCCGAGGTGCTGGCGGACTTCCAGCGCCGCGAGCCCTACAAG TTCCTGCAGTTCGCTTACTTCAAGGCAAATAATCTCCCCAAAGCCATCGCCGCTGCTCACACCTTTCTACTGAAG GACCTGGAAACCAAGTCATATGAAAGCCTGTTCATCCGAGCAGTGCGGGCATACAACGGTGAGAACTGGAGAACA TCCATCACAGACATGGAGCTGGCCCTTCCCGACTTCTTCAAAGCCTTTTACGAGTGTCTCGCAGCCTGCGAGGGT TCCAGGGAGATCAAGGACTTCAAGGATTTCTACCTTTCCATAGCAGATCATTATGTAGAAGTTCTGGAATGCAAA ATACAGTGTGAAGAGAACCTCACCCCAGTTATAGGAGGCTATCCGGTTGAGAAATTTGTGGCTACCATGTATCAT TACTTGCAGTTTGCCTATTATAAGTTGAACGACCTGAAGAATGCAGCCCCCTGTGCAGTCAGCTATCTGCTCTTT GATCAGAATGACAAGGTCATGCAGCAGAACCTGGTGTATTACCAGTACCACAGGGACACTTGGGGCCTCTCGGAT GAGCACTTCCAGCCCAGACCTGAAGCAGTTCAGTTCTTTAATGTGACCACACTCCAGAAGGAGCTGTATGACTTT GCTAAGGAAAATATAATGGATGATGAGGGAGAAGTTGTGGAATATGTGGATGACCTCTTGGAACTGGAGGAG ACCAGCTAGCCCACAGCAACCAAAGAGACTTCCTCTTGGCGTTCAGGAAACACAGATTCTTTGTCCTTTTCCCAA CAGCCCAGGCTGTTGATACCTCAGAGCCTTCTCTTTACTCTCCAAAGTGAAAGGGAAGCCCCCGTCTCTCAACT GCATGTCATCAGGGGTGAGCCTGCCTTTCCTATCTTCACACCTGCCACCTCATGTTCACACCTATCTTTCTCACC TTTTTTTTGAGATGGAGTCTCGCTCTCTTGCCCAGGCTGGAGTGCAATGGCACGTTCTCAGCTCACCTCCAACCTC CGGCTAATTTTGTATTTTAGTAGAGACGGGGTTTTGCCATGTTGGCCAGGCTGGTCTCGAACTCTTGACTTCAG TTTACACCTGTCTTCTTATCCTCACATCTGTTTTCACACCTTCATCCCTGTCTTCCTCATGTTCACACTTGTCTT CCAGAAAATCAGTATTATTTTTTAAATAAGAAAAACATTCCTAGAAGATGATAATTGTGAAAAACCTCCTTTGGCT TATTIGCTTTTCCAGATTTTAGTCTCCTTTCTCCCCATCCGGGAAAGATGGTGGAAGACATAGGCTAAATTTCTC CAGCCTCACAATGGTCTTCACTTGGTCTGACTTGTACCAATTCTAGCACCCACTGAAAAACAAGTTGAGTAGAGA GTGTAGAGTGCAGAAATGTGGCTTTTGCCCCACTTTGCATCTCCAAAATTACAACGGTTGGCCGATCCCATTTGA **AGTAAATATTTATTGAGT**

GAATTCGGGCGCGAAGCGGCCGGCCTGGGCGCCGACTGCAGAGCCGGGAGGCTGGTGGTCA**TG**CCGGGGTTCCTG GTTCGCATCCTCCTTCTGCTGCTGCTTCTGCTGCTTCTGGGCCCTACGCGCGCTTGCGCAATGCCACCCAGAGG CACTACTCCCGTGTGCCCCGCTTCTACTGGAAGGACCGGCTGCTGAAGATGAAGATGGCTGGGCTGAACGCCATC CAGACGTATGTGCCCTGGAACTTTCATGAGCCCTGGCCAGGACAGTACCAGTTTTCTGAGGACCATGATGTGGAA TATTTTCTTCGGCTGGCTCATGAGCTGGGACTGCTGGTTATCCTGAGGCCCGGGCCCTACATCTGTGCAGAGTGG GAAATGGGAGGATTACCTGCTTGGCTGCTAGAGAAAGAGTCTATTCTTCTCCGCTCCTCCGACCCAGATTACCTG GCAGCTGTGGACAAGTGGTTGGGAGTCCTTCTGCCCAAGATGAAGCCTCTCCTCTATCAGAATGGAGGGCCAGTT ATAACAGTGCAGGTTGAAAATGAATATGGCAGCTACTTTGCCTGTGATTTTGACTACCTGCGCTTCCTGCAGAAG CGCTTTCGCCACCATCTGGGGGATGATGTGGTTCTGTTTACCACTGATGGAGCACATAAAACATTCCTGAAATGT GGGGCCCTGCAGGGCCTCTACACCACGGTGGACTTTGGAACAGGCAGCAACATCACAGATGCTTTCCTAAGCCAG CACTCCACAATCAAGACCGAAGCAGTGGCTTCCTCCCTCTATGATATACTTGCCCGTGGGGCGAGTGTGAACTTG TACATGTTTATAGGTGGGACCAATTTTGCCTATTGGAATGGGGCCAACTCACCCTATGCAGCACAGCCCACCAGC TACGACTATGATGCCCCACTGAGTGAGGCTGGGGACCTCACTGAGAAGTATTTTGCTCTGCGAAACATCATCCAG AAGTTTGAAAAAGTACCAGAAGGTCCTATCCCTCCATCTACACCAAAGTTTGCATATGGAAAGGTCACTTTGGAA AAGTTAAAGACAGTGGGAGCAGCTCTGGACATTCTGTGTCCCTCTGGGCCCATCAAAAGCCTTTATCCCTTGACA TTTATCCAGGTGAAACAGCATTATGGGTTTGTGCTGTACCGGACAACACTTCCTCAAGATTGCAGCAACCCAGCA CCTCTCTCTCACCCCTCAATGGAGTCCACGATCGAGCATATGTTGCTGTGGATGGGATCCCCCAGGGAGTCCTT GAGCGAAACAATGTGATCACTCTGAACATAACAGGGAAAGCTGGAGCCACTCTGGACCTTCTGGTAGAGAACATG GGACGTGTGAACTATGGTGCATATATCAACGATTTTAAGGGTTTGGTTTCTAACCTGACTCTCAGTTCCAATATC CTCACGGACTGGACGATCTTTCCACTGGACACTGAGGATGCAGTGCGCAGCCACCTGGGGGGGCTGGGGACACCGT GACAGTGGCCACCATGATGAAGCCTGGGCCCACAACTCATCCAACTACACGCTCCCGGCCTTTTATATGGGGAAC CACATCCTGATGACCTCGGCCCCAAACACCATCACCGTGCTGGAACTGGAGTGGGCACCCTGCAGCAGTGATGAT ${\tt CCAGAACTATGTGCTGTGACGTTCGTGGACAGGCCAGTTATTGGCTCATCTGTGACCTACGATCATCCCTCCAAA}$ AAGCCTGTGTCTTTGAGGGATTCTACCCTGAACATACCTCACAGATCCTCCCTGTCATGCCACATTTCACTGATT GGAATGTGGAAATGGAAAAGGAATTTAGGATGTGCATTTTCACCTGAGGTTTCCCTGCATCCCTGCAGTGCCAAA CCCGAATTC

MPGFLVRILLLLLULLLGPTRGLRNATQRMFEIDYSRDSFLKDGQPFRYISGSIHYSRVPRFYWKDRLLKMKMA GLNAIQTYVPWNFHEPWPGQYQFSEDHDVEYFLRLAHELGLLVILRPGPYICAEWEMGGLPAWLLEKESILLRSS DPDYLAAVDKWLGVLLPKMKPLLYQNGGPVITVQVENEYGSYFACDFDYLRFLQKRFRHHLGDDVVLFTTDGAHK TFLKCGALQGLYTTVDFGTGSNITDAFLSQRKCEPKGPLINSEFYTGWLDHWGQPHSTIKTEAVASSLYDILARG ASVNLYMFIGGTNFAYWNGANSPYAAQPTSYDYDAPLSEAGDLTEKYFALRNIIQKFEKVPEGPIPPSTPKFAYG KVTLEKLKTVGAALDILCPSGPIKSLYPLTFIQVKQHYGFVLYRTTLPQDCSNPAPLSSPLNGVHDRAYVAVDGI PQGVLERNNVITLNITGKAGATLDLLVENMGRVNYGAYINDFKGLVSNLTLSSNILTDWTIFPLDTEDAVRSHLG GWGHRDSGHHDEAWAHNSSNYTLPAFYMGNFSIPSGIPDLPQDTFIQFPGWTKGQVWINGFNLGRYWPARGPQLT LFVPQHILMTSAPNTITVLELEWAPCSSDDPELCAVTFVDRPVIGSSVTYDHPSKPVEKRLMPPPPQKNKDSWLD

CTGAAAAAGACCTCAGAGGTGGACCTGGCCAAGCCGCTGGTGAAGTTCATCCAGCAGACTTACCCAAGCGGCGG GACAAGCACGAGGCCCCCCGAGACGCTCCTGAGATATTATGATCAGATTTGTTCTATTGAACCCAAATTCCCA TTTTCTGAAAATCAGATCTGCTTGACATTTACCTGGAAGGATGCTTTCGATAAAGGTTCACTTTTTGGAGGCTCT ATTGCAGCAGAACAGAACCTGGATAATGATGAAGGATTGAAAAATCGCTGCTAAACATTACCAGTTTGCTAGTGGT GCCTTTTTACATATTAAAGAGACGGTTTTATCTGCCTTAAGTCGAGAGCCGACCGTGGACATATCTCCAGATACT AAAGATGCCATCATAGCTAAATTGGCTAATCAGGCTGCAGATTATTTTGGTGATGCTTTCAAACAGTGTCAATAC AAAGATACTCTCCCCAAGGAGGTGTTCCCTGTCTTGGCTGCAAAGCACTGTATCATGCAGGCCAATGCTGAGTAC CATCAGTCTATCCTGGCAAAACAGCAGAAGAAATTTGGAGAAGAAATTGCAAGGTTACAGCATGCAGCAGAACTG GCTGCAGCAAAGAAGGATAATGACTTCATTTATCATGATCGAGTTCCAGACCTTAAAGATCTAGATCCTATTGGC GTTCCCGTGTCAGTACAGCAGTCTTTGGCTGCCTATAATCAGAGGAAAGCCGATTTGGTTAACAGATCAATTGCT CAGATGAĞAGAAGCCACCACTTTGGCAAATGGGGTGCTAGCTTCCCTTAATCTTCCAGCAGCAATTGAAGATGTG TCTGGAGACACTGTACCTCAGTCTATATTGACTAAATCCAGATCTGTGATTGAACAGGGAGGCATCCAGACTGTT GATCAGTTGATTAAAGAACTGCCTGAATTACTGCAACGAAATAGAGAAATCCTAGATGAGTCATTAAGGTTGTTG GATGAAGAAGAAGCAACCGATAATGATTTAAGAGCAAAATTTAAGGAACGTTGGCAAAGGACACCATCCAATGAA GTGAAAGAATGTTACCAGTCTCATCGTGACACCATCGTGCTTTTGTGTAAGCCAGAGCCTGAGCTGAATGCTGCC ATCCCTTCTGCTAATCCAGCAAAGACCATGCAGGGCAGTGAGGTTGTAAAATGTCTTAAAATCCTTATTGTCAAAT TTTTTGACAGCCCTGGCTCAAGATGGTGTGATAAATGAAGAAGCTCTTTCTGTTACTGAACTAGATCGAGTCTAT GGAGGTCTTACAACTAAAGTCCAAGAATCTCTAAAGAAACAGGAGGGACTTCTTAAAAATATTCAGGTCTCACAT CAGGAATTTTCAAAAATGAAACAATCTAATAATGAAGCTAACTTAAGAGAAGAAGTTTTGAAGAATTTAGCTACT CTGGTCAGGTTCCAGAACAAATGCAGTGATATAGTTTTTGCACGGAAGACAGAAAGAGATGAACTCTTAAAGGAC TTGCAACAAAGCATTGCCAGAGAACCTAGTGCTCCTTCAATTCCTACACCTGCGTATCAGTCCTCACCAGCAGGA CCACCACCTGTGCTTCCAGCAAATCGAGCTCCTTCTGCTACTGCTCCATCTCCAGTGGGGGCTGGGACTGCTGCG CCAGCTCCATCACAAACGCCTGGCTCAGCTCCTCCACAGGCGCAGGGACCACCCTATCCCACCTATCCAGGA TATCCTGGGTATTGCCAAATGCCCATGCCCATGGGCTATAATCCTTATGCGTATGGCCAGTATAATATGCCATAT CCACCAGTGTATCACCAGAGTCCTGGACAGGCTCCATACCCGGGACCCCAGCAGCCTTCATACCCCTTCCCTCAG $\tt CCCCCACAGCAGTCTTACTATCCACAGCAGCTAATATGTCTGCTCAGCAGCTCAGCTGATTCAGATCAGAGGGAAA$ GAAATACCAACCCTGCAATAAGTGTACTAAACTCTACGCTCTGGTTAATGTAATGTACTCTCCTGGACTGAATGC AGTGTATAATTTCTGTCTACAGCTAGAAGCTGTGCCCCAGTTCCACATTTGATTACACATGTGAGATTTGCTGCT GTTGCAGTATAAACACTAGGTATAATAGGATTTGAAATTGCATTACAGTTCATAAAAATTGAAAATGAGAAATTA AACCTGCAAGTGAAACATTTGAAACGATTATACTTTCTACATAAGACATGGTTGGGACATCAGATACTTACAAAG ATGGTTTAAGTATGGATACTAGAGAAAATTAAGTTTTCTTTTCTCTTTGGTTTATTGATTTGGTTTAATTTCCATT

MATFISVQLKKTSEVDLAKPLVKFIQQTYPSGGEEQAQYCRAAEELSKLRRAAVGRPLDKHEGALETLLRYYDQI
CSIEPKFPFSENQICLTFTWKDAFDKGSLFGGSVKLALASLGYEKSCVLFNCAALASQIAAEQNLDNDEGLKIAA
KHYQFASGAFLHIKETVLSALSREPTVDISPDTVGTLSLIMLAQAQEVFFLKATRDKMKDAIIAKLANQAADYFG
DAFKQCQYKDTLPKEVFPVLAAKHCIMQANAEYHQSILAKQQKKFGEEIARLQHAAELIKTVASRYDEYVNVKDF
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DLVNRSIAQMREATTLANGVLASLNLPAAIEDVSGDTVPQSILTKSRSVIEQGGIQTVDQLIKELPELLQRNREI
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PEPELNAAIPSANPAKTMQGSEVVNVLKSLLSNLDEVKKEREGLENDLKSVNFDMTSKFLTALAQDGVINEEALS
VTELDRVYGGLTTKVQESLKKQEGLLKNIQVSHQEFSKMKQSNNEANLREEVLKNLATAYDNFVELVANLKEGTK
FYNELTEILVRFQNKCSDIVFARKTERDELLKDLQQSIAREPSAPSIPTPAYQSSPAGGHAPTPPTPAPRTMPPT
KPQPPARPPPPVLPANRAPSATAPSPVGAGTAAPAPSQTPGSAPPPQAQGPPYPTYPGYPGYCQMPMPMGYNPYA
YGQYNMPYPPVYHQSPGQAPYPGPQQPSYPFPQPPQQSYYPQQ

FIGURE 1093A

TGCGGAGGCCGAGGACAGGACGTGGGCTGGGCCGGGCAGTGCCGGACTCGGAGGAGCAGGAGGCGAGGTCCGCCG GAGCTCTGAACCCCGCTGCTCTGCCGCGCGGTGACCCCGGCGCCCCGGCGCCGTCCGACCCGTGGCTGTTCCGAG ${\tt ATCAACAGGGACGATTACGAGCTGCAGGAGGTGATCGGGAGCAGCTATTGT}$ GCCCCTAAAAAGGAGAAAGTGGCAATCAAACGGATAAACCTTGAGAAATGTCAAACTAGCATGGATGAACTCCTG AAAGAAATTCAAGCCATGAGTCAATGCCATCATCCTAATATTGTATCTTACTACACATCTTTTGTGGTAAAAGAT GAGCTGTGGCTTGTCATGAAGCTGCTAAGTGGAGGTTCTGTTCTGGATATTATTAAGCACATTGTGGCAAAAGGG GAACACAAAAGTGGAGTCCTAGATGAATCTACCATTGCTACGATACTCCGAGAAGTACTGGAAGGGCTGGAATAT CTGCATAAAAATGGACAGATCCACAGAGATGTGAAAGCTGGAAACATTCTTCTTGGAGAAGATGGCTCAGTACAG ATTGCAGACTTTGGGGTTAGTGCTTTTTTAGCAACTGGTGGTGATATTACCCGAAATAAAGTGAGAAAGACCTTT GTTGGCACCCCTTGTTGGATGGCACCTGAAGTTATGGAACAGGTCCGTGGTTATGATTTCAAAGCTGATATTTGG AGTTTTGGAATTACAGCAATTGAATTGGCTACAGGGGCGGCTCCTTATCATAAATATCCACCAATGAAGGTTTTA ATGCTGACACTGCAGAACGATCCTCCTTCTTTGGAAACTGGTGTTCAAGATAAAGAAATGCTGAAAAAATATGGA AAATCATTTAGAAAAATGATTTCATTGTGCCTTCAAAAAGATCCAGAAAAAAGACCAACAGCAGCAGAACTATTA TCTGAAAGAGCAAAAAAGGTTCGGAGAGTACCAGGTTCCAGTGGGCGTCTTCATAAGACAGAGGATGGAGGCTGG GAGTGGAGTGATGAATTTGATGAAGAAAGTGAGGAAGGGAAAGCAGCAATTTCACAACTCAGGTCTCCCCGA GTGAAAGAATCAATATCAAATTCTGAGCTCTTTCCAACAACTGATCCTGTGGGTACTTTGCTCCAAGTTCCAGAA GCAGAGCCAGCAAAAACAGCTCAGGCTTTGTCTTCAGGATCAGGTTCACAAGAAACCAAGATCCCAATCAGTCTA GTACTAAGATTAAGGAATTCCAAAAAAGAACTAAATGATATTCGATTTGAATTTACTCCTGGGAGAGATACAGCA GAGGGTGTCTCTCAGGAACTCATTTCTGCTGGCCTGGTCGACGGAAGGGATTTAGTAATAGTGGCAGCTAATTTG CAGAAAATTGTGGAAGAACCTCAGTCAAATCGATCTGTCACTTTCAAACTGGCATCTGGTGTCGAAGGCTCAGAT TAAGGAGATTCCACACATGCGTATCTCTGTTGCTTCTATTGGCCTAAACCCACTACTGCCAAAGAACCCAGCAAC AAACCTCCCGGCTAGGAGCTTTAGAAGTCTTTATGTTCTTCCTGCCATCATTCCTCCTTTTCCCACAGGGAAAGA TTTTTCTTTGTACCTGATGTGAATTCTAGCAACCTTTGTTAGGAAAAAGCACAGCCTCAGATGGAGGCAGCCTAA ACTGTGTTCTTGTTCATGGTGTTTCTAAGCGTTTTGCTGAAGCTGCTCTCAGGCACCCCCTTCTTCATTG $\tt CTCTCCCAGAAAGGGTTGCTAGCCTTAACTTCAGCTGGTGCAAAACATCTGACTGTAGCCGAACTTCAGCCATC$ AGATCCTTCAAAGTGGAACTTTGGATTGTTTTTACAGACAACATCGAGTAATGGCTTGTAAATGTGAATTTTGCC AAAAACTCAATCCTCCCATGAAAATCAGTTCGCCTGGCCTCCAAGTCGTGAGGAAATGGGTATGCAAGGCTGAGA TGGAGGGGGTCTCTGTGTGCTGAAGCTAACTCAAGATGGAAAGTGAAACCACATGTGCCGTGACCTTTAGGTTTT ATGAGTAGACAGTGTTCATTTGATTTTCTACAGAAATAATATAAATTATTCTTTAGGTTTAAAAAAAGAGCACTCA AGTAACCCTACCGAGTTTTATATATGAGTGGGATACTCAATCTGGCCTTAAAAAGATACACAAAGATGGGCTGTG GGTCCCTGGAAAGGGGGAGAGTTGCCCTTTACAGAATCACTCGAGCCCTTTCCAGCACTGTTGGTCTGATGAACA AGGTTGTTTTACCTTATTTTCTCTTGGAACATATCTGAAAACCTTCCCCACAAATAACTTGTCACACCTTTTGTT TCATTCTGAGTCTTTAGTTTTAGTCATGGGCTTTCTTCACCTGCTCTAGGTGCAAAGGCATGTTGGGAAAGAGAT

FIGURE 1093B

MSEDSSALPWSINRDDYELQEVIGSGATAVVQAAYCAPKKEKVAIKRINLEKCQTSMDELLKEIQAMSQCHHPNI
VSYYTSFVVKDELWLVMKLLSGGSVLDIIKHIVAKGEHKSGVLDESTIATILREVLEGLEYLHKNGQIHRDVKAG
NILLGEDGSVQIADFGVSAFLATGGDITRNKVRKTFVGTPCWMAPEVMEQVRGYDFKADIWSFGITAIELATGAA
PYHKYPPMKVLMLTLQNDPPSLETGVQDKEMLKKYGKSFRKMISLCLQKDPEKRPTAAELLRHKFFQKAKNKEFL
QEKTLQRAPTISERAKKVRRVPGSSGRLHKTEDGGWEWSDDEFDEESEEGKAAISQLRSPRVKESISNSELFPTT
DPVGTLLQVPEQISAHLPQPAGQIATQPTQVSLPPTAEPAKTAQALSSGSGSQETKIPISLVLRLRNSKKELNDI
RFEFTPGRDTAEGVSQELISAGLVDGRDLVIVAANLQKIVEEPQSNRSVTFKLASGVEGSDIPDDGKLIGFAQLS

CCGGTCTCCTCCACATCCTCCCTTGCCTGCTCTCAACATGCGAGTGCGGCGCCGCCTGTCTCTTTTTTG AACGTGCGGACACAGGTGGCGGCCGACTGGACCGCGCTGGCGGAGGAGATGGACTTTGAGTACTTGGAGATCCGG CAACTGGAGACACAAGCGGACCCCACTGGCAGGCTGCTGGACGCCTGGCAGGGACGCCCTGGCGCCTCTGTAGGC TGCCAAAAGTATATCTTGAAGCAGCAGCAGGAGGAGGCTGAGAAGCCTTTACAGGTGGCCGCTGTAGACAGCAGT GTCCCACGGACAGCAGAGCTGGCGGGCATCACCACACTTGATGACCCCCTGGGGCATATGCCTGAGCGTTTCGAT GCCTTCATCTGCTATTGCCCCAGCGACATCCAGTTTGTGCAGGAGATGATCCGGCAACTGGAACAGACAAACTAT GAAAAGAGGTGCCGCCGGATGGTGGTTGTCTCTGATGATTACCTGCAGAGCAAGGAATGTGACTTCCAGACC AAATTTGCACTCAGCCTCTCCCAGGTGCCCATCAGAAGCGACTGATCCCCATCAAGTACAAGGCAATGAAGAAA GAGTTCCCCAGCATCCTGAGGTTCATCACTGTCTGCGACTACACCCAACCCCTGCACCAAATCTTGGTTCTGGACT $\texttt{CGCCTTGCCAAGGCCTTGTCCCTGCCC} \underline{\textbf{TGA}} \texttt{AGACTGTTCTGAGGCCCTGGGTGTGTGTATCTGTCTGCCTGTC}$ CATGTACTTCTGCCCTGCCTCCTTTCGTTGTAGGAGGAATCTGTGCTCTACTTACCTCTCAATTCCTGGAGA TGCCAACTTCACAGACACGTCTGCAGCAGCTGGACATCACATTTCATGTCCTGCATGGAACCAGTGGCTGTGAGT GGCATGTCCACTTGCTGGATTATCAGCCAGGACACTATAGAACAGGACCAGCTGAGACTAAGAAGGACCAGCAGA GCCAGCTCAGCTCTGAGCCATTCACACATCTTCACCCTCAGTTTCCTCACTTGAGGAGTGGGGATGGGGAGAACAG AGAGTAGCTGTGTTTGAATCCCTGTAGGAAATGGTGAAGCATAGCTCTGGGTCTCCTGGGGGAGACCAGGCTTGG CTGCGGGAGAGCTGGCTGTTGCTGGACTACATGCTGGCCACTGCTGTGACCACGACACTGCTGGGGCAGCTTCTT CCACAGTGATGCCTACTGATGCTTCAGTGCCTCTGCACACCGCCCATTCCACTTCCTCCTTCCCCACAGGGCAGG TGGGGAAGCAGTTTGGCCCAGCCCAAGGAGACCCCATCTTGAGCCTTATTTCCTAATGGGTCCACCTCTCATCTG CATCTTTCACACCTCCCAGCTTCTGCCCAACCTTCAGCAGTGACAAGTCCCCAAGAGACTCGCCTGAGCAGCTTG GGCTGCTTTTCATTTCCACCTGTCAGGATGCCTGTGGTCATGCTCTCAGCTCCACCTGGCATGAGAAGGGATCCT GGCCTCTGGCATATTCATCAAGTATGAGTTCTGGGGATGAGTCACTGTAATGATGTGAGCAGGGAGCCTTCCTCC CTGGGCCACCTGCAGAGAGCTTTCCCACCAACTTTGTACCTTGATTGCCTTACAAAGTTATTTGTTTACAAACAG TATATGTACAGACATGTACTCTCACACACAGGCACCAGCATACACACGTTTTTCTAGGTACAGCTCCCAGGAA CAGCTAGGTGGGAAAGTCCCATCACTGAGGGAGCCTAACCATGTCCCTGAACAAAAATTGGGCACTCATCTATTC CTTTTCTCTTGTGTCCCTACTCATTGAAACCAAACTCTGGAAAGGACCCAATGTACCAGTATTTATACCTCTAAT GAAGCACAGAGAGAGAGAGAGAGCTGCTTAAACTCACACAACAATGAACTGCAGACACAGCTGTTCTCCCCTCT CTCCTTCCCAGAGCAATTTATACTTTACCCTCAGGCTGTCCTCTGGGGAGAAGGTGCCATGGTCTTAGGTGTCTG TGCCCCAGGACAGACCCTAGGACCCTAAATCCAATAGAAAATGCATATCTTTGCTCCACTTTCAGCCAGGCTGGA GCAAGGTACCTTTTCTTAGGATCTTGGGAGGGAATGGATGCCCCTCTCTGCATGATCTTGTTGAGGCATTTAGCT GCCATGCACCTGTCCCCCTTTAATACTGGGCATTTTAAAGCCATCTCAAGAGGCATCTTCTACATGTTTTGTACG CATTAAAATAATTTCAAAGATATCTGAGAAAAGCCGATATTTGCCATTCTTCCTATATCCTGGAATATATCTTGC

MAAGGPGAGSAAPVSSTSSLPLAALNMRVRRRLSLFLNVRTQVAADWTALAEEMDFEYLEIRQLETQADPTGRLL DAWQGRPGASVGRLLELLTKLGRDDVLLELGPSIEEDCQKYILKQQQEEAEKPLQVAAVDSSVPRTAELAGITTL DDPLGHMPERFDAFICYCPSDIQFVQEMIRQLEQTNYRLKLCVSDRDVLPGTCVWSIASELIEKRCRRMVVVVSD DYLQSKECDFQTKFALSLSPGAHQKRLIPIKYKAMKKEFPSILRFITVCDYTNPCTKSWFWTRLAKALSLP

ATGTGGTTCTGCGCGTGTGCGGACGGCTGTCTGTTAACTCCGCGGTCAGTTCCCGGACTGGTGGCTGGTCTGCAG CGCAGGCCGCGCTTGCCTGAGCGGTGCCCCGCAGGCCTCGGCCGGACGTGGTGGTGGTGCACGGGCGGCGCA $\tt CGGCCATCTGCCGGGCGGGCGGGGGGGGTTCAAGGACACCACCCCGACGAGCTTCTCTCGGCAGTCATGACCG$ CGGTTCTCAAGGACGTGAATCTGAGGCCGGAACAGCTGGGGGACATCTGTGTCGGAAATGTGCTGCAGCCTGGGG CCGGGGCAATCATGGCCCGAATCGCCCAGTTTCTGAGTGACATCCCGGAGACTGTGCCTTTGTCCACTGTCAATA GACAGTGTTCGTCGGGGCTACAGGCAGTGGCCAGCATAGCAGGTGGCATCAGAAATGGGTCTTATGACATTGGCA TGGCCTGTGGGGTGGAGTCCATGTCCCTGGCTGACAGAGGGAACCCTGGAAATATTACTTCGCGCTTGATGGAGA AGGAGAAGGCCAGAGATTGCCTGATTCCTATGGGGATAACCTCTGAGAATGTGGCTGAGCGGTTTGGCATTTCAC GGGAGAAGCAGGATACCTTTGCCCTGGCTTCCCAGCAGAAGGCAAGAGCCCAGAGCAAGAGCTGTTTCCAAG CTGAGATTGTGCCTGTGACCACCACGGTCCATGATGACAAGGGCACCAAGAGGAGCATCACTGTGACCCAGGATG CAGCTGGAAACTCTAGCCAGGTGAGTGATGGGGCAGCTGCCATCCTGCTGGCCCGGAGGTCCAAGGCAGAAGAGT TGGGCCTTCCCATCCTTGGGGTCCTGAGGTCTTATGCAGTGGTTGGGGTCCCACCTGACATCATGGGCATTGGAC AGGCCTTTGCAAGCCAGGCTGCCTACTGTGTGGAGAAGCTACGACTCCCCCTGAGAAGGTGAACCCCCTGGGGG GTGCAGTGGCCTTAGGGCACCCACTGGGCTGCACTGGGGCACGACAGGTCATCACGCTGCTCAATGAGCTGAAGC GCCGTGGGAAGAGGGCATACGGAGTGGTGCCATGTGCATCGGGACTGGAATGGGAGCCGCTGCCGTCTTTGAAT ${\tt ACCCTGGGAAC} \underline{{\tt TGA}}{\tt GTGAGGTCCCAGGCTGGAGGCGCTACGCAGACAGTCCTGCTGCTCTAGCAGCAAGGCAGTA$ ACACCACAAAAGCAAAACCACATGGGAAAACTCAGCACTGGTGGTGGTGGCAGTGGACAGATCAAGGCACTTCAA TTAGCTGTGCAAGATAAAAGCAGCCTGGGTCACCCAGGCCACAAGGCCATGGTTAATTCTTAAGGCAAGGCAAAT CCATGGATGAGAAGTGCAATGGGCATAGTAAAAGTGCATGAATTT

MQRLQVVLGHLRGPADSGWMPQAAPCLSGAPQASAADVVVVHGRRTAICRAGRGGFKDTTPDELLSAVMTAVLKD VNLRPEQLGDICVGNVLQPGAGAIMARIAQFLSDIPETVPLSTVNRQCSSGLQAVASIAGGIRNGSYDIGMACGV ESMSLADRGNPGNITSRLMEKEKARDCLIPMGITSENVAERFGISREKQDTFALASQQKAARAQSKGCFQAEIVP VTTTVHDDKGTKRSITVTQDEGIRPSTTMEGLAKLKPAFKKDGSTTAGNSSQVSDGAAAILLARRSKAEELGLPI LGVLRSYAVVGVPPDIMGIGPAYAIPVALQKAGLTVSDVDIFEINEAFASQAAYCVEKLRLPPEKVNPLGGAVAL GHPLGCTGARQVITLLNELKRRGKRAYGVVSMCIGTGMGAAAVFEYPGN

GTTCCTCCGGGAGCCCAACACCGTTCCCGCGCGGCCACGATCATCCCTCCGAGCAGCCCCCGCGAGGACGGCGTG GACGGGCTGCCCAAGGAGGCGGTGGGCCCCAACCGCCCTCTCCTGCATCCACCAGCAGCCAGGAATCCAAG CTCCAGAAACTAAAACGATCACTTTCTTTCAAGACCAAGAGTTTACGGAGCAAAAGTGCTGACAACTTCTTCCAG $\tt CGAACCAACAGCGAAGACATGAAACTGCAAGCACACATGGTGGCTGAGATCAGCCCCAGCTCCAGCCCACTCCCT$ GCTCCAGGAAGCCTGACGTCCACACCCGCCAGGGCTGGTCTGCATCCAGGTGGCAAGGCTCATGCCTTTCAGGAA TACATCTTCAAGAAGCCCACTTTCTGTGATGTCTGCAACCACATGATAGTGGGAACAAATGGTAAGCATGGACTG ACAAAGAAGGGCAGCTCCGGCAGTGGCTCTGACTCAĆCTCACAGAACCTCTACTTCAGATCTTGTGGAGGTTCCT GAGGAAGCCAATGGGCCAGGAGGCGGGTATGACCTAAGGAAACGCAGCAACAGCGTGTTTACATATCCAGAAAAT GGCACTGATGATTTCAGAGATCCAGCGAAGAACATAAACCACCAGGGATCTCTTTCCAAAGACCCATTACAGATG AACACCTATGTTGCCTTGTACAAATTTGTACCACAGGAGAATGAAGATTTGGAAATGAGGCCAGGAGACATAATT ACTCTTTTAGAGGATTCCAATGAAGACTGGTGGAAAGGGAAAATTCAAGACAGAATTGGCTTCTTTCCAGCCAAC TTTGTTCAGAGACTACAACAAAATGAGAAGATTTTTAGATGTGTTAGAACCTTCATTGGGTGTAAGGAACAGGGG CAGATAACACTGAAAGAGAATCAGATCTGCGTGAGTTCTGAAGAAGAACAAGATGGTTTTATCAGAGTCCTCAGT ${\tt GGAAAAAAGGAAAGGCCTCATCCCCCTTGATGTACTAGAAAACATC} {\tt TGAT}{\tt TGCTGGCTCCTCCGTTTGCAGTA}$ GGCAAGCTCTGCTGCGATGCCTCTGCCTCATCTCACACTGCGTCAACCCAAAGGAGCTGCCGCACTGACCCAGCC CCCCAGGAAACAGTGAGACAAGAATCAAGTATCTGAGACTGTGGAGTAATAGCCACAAAACAGAGGGCCCACTGC ACACTGGAGTGTGCTCCAGTTTGCAGGGTAGCCCAGTGCAAGGTTCAGATCCATGTAGCTAAGTATTATCCTGCT TCCAGACCTATGTCACCAGTACCAATCAGTCAGTGTCATCACATTTCAGGCCCCAAGCAATCTCTGTGCAAAGCA TCAGAAAGACCTGCTTCCCAGCCCCCAGCATTCCAGTGCTCTCCAGGCTTCCTCTTTTGTGATTGTGCTGTCCA GAGTGTCCAGCTTGTTCTTTCTTCTCTCAGTCCTCTGAGTACATCTGGTGGTGTGCATTAGATGTGAGGGCTA GTACTGGCCTGGGTGACAGAGCAGGACATGAGACATAGATACAGTGGGGAGGAGAAGTGGGGAAAGGTGGAGCAG AGAGTTCTTACTTATTGAAGATTATACAGCCCTTTCGGTTATGAAGTCCCTGCTTGAAGGCAATGGACCTGGGGA AGAGACTATCACAAAAAGTCTCCATTTTCATTTTACATCCTCTCTATTGGAGGCAGCACTTTTCCCTCATGCTGT CCTATAGGACTCCACTTGAAGGTTGTGCCTACGTTGCAGGGAACTAGGAACATGGAGGGGAACCAACAACAGCA TCTTAGAAGAAATGTAGCCAAATTGGAGTCCATTCTTCTTTAGGGCAGTATATGAAATCCTAGCAGATGTAAAAT GGAAAAGAATCCTAATGCTTCTTCCTTCAGAAAGTAGAGGAACTAGGGGCCCAATTAGCATCATCTAGGGGAATC TCTATTACTCTGTACTTATACTAATGTTTACAAGAATGCAATATACTGTGATGCCTTCCTACTCAAGCCTCCTAG CATTCAAACTTCCATCCTATTAGTCATTAACGTGGTTAAACTTCACATTCACAATCACCTTGGAATCAATGTCAGT TTGATTTATTTTGTTACAGAGCAATAAAATCATTAGAACAATGGTTTTTAAAAGACTTAAGTGGATGCATCCTAT TTGGGAACTGAGAGGGGATGGCTGCTTGTTTCACAGAAGTTTGGATGCCTTACTCTTATCTTAAAGCCAGCATCC AGAATTTCCTCCCTCTCTGATGCCACATGCAAAACCAGGTGTACGATGTCAAGATGGATTCTTTGAGAGCCAGGG TAGATCATATGACTGCCTTTCTGTAAAATTGGATGCCTAGTACAAATGCTCTTTGCCTCTAATTCAGTATTCCAT TTAATAAAAACAATACAGTGGCTGGAAAGGAGCATCAG

MIPPSSPREDGVDGLPKEAVGAEQPPSPASTSSQESKLQKLKRSLSFKTKSLRSKSADNFFQRTNSEDMKLQAHM VAEISPSSSPLPAPGSLTSTPARAGLHPGGKAHAFQEYIFKKPTFCDVCNHMIVGTNAKHGLRCKACKMSIHHKC TDGLAPQRCMGKLPKGFRRYYSSPLLIHEQFGCIKEVMPIACGNKVDPVYETLRFGTSLAQRTKKGSSGSGSDSP HRTSTSDLVEVPEEANGPGGGYDLRKRSNSVFTYPENGTDDFRDPAKNINHQGSLSKDPLQMNTYVALYKFVPQE NEDLEMRPGDIITLLEDSNEDWWKGKIQDRIGFFPANFVQRLQQNEKIFRCVRTFIGCKEQGQITLKENQICVSS EEEQDGFIRVLSGKKKGLIPLDVLENI

GCCGCGGGCTTCGTTTGTGAGGAAGGGGGCCTAGGCCCGGGCCTGCGGTGGTGGGGGTTGCTGCGCGCCGGGGGT GGAGCC<u>ATG</u>GAGGACGAAGTGGTCCGCTTTGCCAAGAAGATGGACAAGATGGTGCAGAAGAAGAAGACGCGGCTGGA GCATTGGATTTGCTAAAGGAGCTTAAGAATATTCCTATGACCCTGGAATTACTGCAGTCCACAAGAATCGGAATG TCAGTTAATGCTATTCGCAAGCAGAGTACAGATGAGGAAGTTACATCTTTGGCAAAGTCTCTCATCAAATCCTGG AAAAAATTATTAGATGGGCCATCAACTGAGAAAGACCTTGACGAAAAGAAGAAGAACCTGCAATTACATCGCAG AACAGCCCTGAGGCAAGAGAAGAAGTACTTCCAGCGGCAATGTAAGCAACAGAAAGGATGAGACAAATGCTCGA GATACTTATGTTTCATCCTTTCCTCGGGCACCAAGCACTTCTGATTCTGTGCAGTTGAAGTGTAGGGAGATGCTT GCTGCAGCTCTTCGAACAGGGGATGACTACATTGCAATTGGAGCTGATGAGGAAGAATTAGGATCTCAAATTGAA GAAGCTATATATCAAGAAATAAGGAATACAGACATGAAATACAAAAATAGAGTACGAAGTAGGATATCAAATCTT AAAGATGCAAAAAATCCAAATTTAAGGAAAAATGTCCTCTGTGGGAATATTCCTCCTGACTTATTTGCTAGAATG ACAGCAGAGGAAATGGCTAGTGATGAGCTGAAAGAGATGTGGAAAAACTTGACCAAAGAAGCCATCAGAGAGCCAT CAGATGGCCAAGACTGGTGGGACCCAGACTGACTTGTTCACATGTGGCAAATGTAAAAAGAAGAATTGCACTTAC AAGTTCTGT<u>TGAGTTGGAAGAATTGGCAAAATATCTGGACCATTAAGAAAACGGATTTTGTAACTAGCTTTAAA</u>C TAGGCCAAGCAACTAGTTTTCCTGCAAATCAAATTTTTAAAGCAACTTGAGTTAGACTTTGTTTTTTGACCTAACA TCCCTTCCTTAAATGCCTTCTGTAGTTTCAGATCAGTAGGGAGACCATATAATAATTGTATGGTACCTGTTTCAA AAATACACCTTAACTTTTTTCTTTTACACTGTGAAACATACACAGTAGAAATTCTGTTACTCTCTGTTATTAAT ACATAAATGAAAATACTTTTTTTCCATATTGGCATGTAGCTACAAATATTAAAGGAGGAGAAAAGGTAATATAA TTTTAGGTTTACCAAATATGGTGTGTATTCAAATAATACTTGACCAGCTTATCTAAAATGTACATAATTTTGAGG TAGCTTATGAATTTGATTTTAATTATTATGTTCACAAGCTTGGAATATTAGATATTATTTTTGCATCTGTAACTAA CCGTGATCATCTCTTGTAATTTCTTGTACATGTATATTACTTGTTCTTAATAGATTTTTTGGAAACAAGACTT TATTGAGATCAGTTTGGTTTTCCTGTTAATTTACCTGTTTGACTTTATAATGTGTTTTAGTTTTGCAGAAGAACA CTGTTGTAGTTTAGAAGGCTTTTCATAAATCCCCTCATAGGCAAAGATGAGAACTTCCCACTATTTTTTTCCCCT CTTAGGAAGACATACTGGAAAGAAATGTTTAGCATCTTAGTGTAGTATAGCTATTGTAAACAGTTCATGACTAG ATTTTGATTCGGAAATCTATACTGACCAAGGATTAATCTTAAGGACTGTATAATTCATTAAAGCGGTGGTCTTTC TGAACAAACTGAATATATGGGCTATAGCAAGTAGCTTTACAGTACAGATCTTACAATTAAGTTTTGCTTTTGTTA AAGTGTGTACCATTTTTCTGTTTGGAGTAAGACAAAAATTGTTTTGACATAGGTTCCCTAGGGTACACTTGCTC TAGCATACTTTAAAGGCCACTGTTGCAAAGTCTACATTTTATGCTGAATCTGCATTCTGTCAGGCACCCGTAGAA AGACCTCAGTACATGCTTTGCACTCTCTTTGCTCCCTTTTTCCAATTTCTTATTGCATATCATTTTGTTGTAAT ACAGAAAGCAGCATTTTTAAATGTCCATGTTAAGAATTGGCCCACTGGTACCGACTCACCTCTATTTTGTCAGTT CATAGTTGAAGATTTTGTTTTATTTCAAAAACAAAGTACATTTTTGAAATAATGTTTCAGAATAAAATAATCTCA

MEDEVVRFAKKMDKMVQKKNAAGALDLLKELKNIPMTLELLQSTRIGMSVNAIRKQSTDEEVTSLAKSLIKSWKK LLDGPSTEKDLDEKKKEPAITSQNSPEAREESTSSGNVSNRKDETNARDTYVSSFPRAPSTSDSVQLKCREMLAA ALRTGDDYIAIGADEEELGSQIEEAIYQEIRNTDMKYKNRVRSRISNLKDAKNPNLRKNVLCGNIPPDLFARMTA EEMASDELKEMWKNLTKEAIREHQMAKTGGTQTDLFTCGKCKKKNCTYTQVQTRSADEPVTTFVVCNECGNRWKF C

 ${\tt AGGTCCCACCGCTCCTACCAGCAGCCTGACCCAGG} \underline{{\tt ATG}} {\tt GCTCTACTCCCCAGCCTTCAATCCCTGGACCTGGGTT}$ TGGAATTAGGAGACTTCCGTCGAGGGTCAATTGTGCGGGATCCTGGCCATTCCATACAAAATCTCACGACTGGCA AAAGAGAGGGGACCCCTCGAGCAGAGGTCAGATATCACAAGGGACCCGGGTTTTTCCACCCCGCCCTCATTCCC AGCGTGGGGTCTCAGATGAGTGGGGAAAACCTCAAATATGGATCAGAAATCATGCAAGTTCGGACTCTGGCCTTAG ${\tt GAGAAAACTCT} \underline{{\tt TAA}} {\tt CGGAGATGGGAATGTCACGAGGGATCCAGCCACCCCATCCACTCATTGACTGGATGAAGTT}$ TTGCGATGGGAAAATCCAGGTCAGGAGTTACGGACGACCTGCACCGCCCGGAGCTCCTTCTGGGTCCGGAGTTTG GGAAAAGTGCGGGTTAGGGGTTAAAGGTCACGGAAGAACTTCCCCACTCCCCCGCCTCTTTCGTCCGCGGGCCG GTTCAAGAGGTATTCGGAACCAGGGGAGAGAGCGGCGGCCATCGTACCTGAGCAGGAGCCAGCGCCTGCTGGAG GGGGGCCGGGCCTCCCCTCCTTGAGGCTGTGGGCAAGTCCGGACACTCGTCCTGAGGGTGTCGGCGTCG CCGCCGCGCGTCTCTTCTTCCGGGTGCCACTGGCTGGCCTCGGCCCCCATCCAGCCCCGGGAGCCGCGGCGG $\tt CGACGACAACGGCAGCTGAACTGTGCGCCAAGGGCGTTGCGCGGCCTACGTGGAGCTCACAGAGGCTAACT$ ${\tt ACGGAGCACCGGATGGGACAAGCACAATGTCGGGTCCCGCACATGCGCCTCGGCCGGTCGCTTCCGAACTCGCT}$ GCGTGGGCTAGTCTGAACACTACCCTGACTCTCACCTGGGCTTTGGCCCTGCGAAATCAGACGGGGAGAGTGCTG CTTCTATCGATGGCAGCAGGGCCGACGGCCCACCGCAAAGAACACAGGGATGAGCGTCAAGGATGGGAGAAGGG GAGATCCAGAGAACCTGACGCGGGCCCTAATTGATAGTGTTCTTTTCTTTAGTAGCTGTAGCTAGGATTCTGTGT ATCGTGTATTCACGAATTCATTCAAAAACCTTTATCAGGCCTTGGAGATGTTAAAAGAATTTACAGCCTAGTGG AAGACACAGATTCCTAATTAGTCCAAATTTACTCCTAACACCTGCAATCATCCTACAAGATCTTAATGTTTATGT GCCTCATTTATCTAAAACCCTGAACTTTGGCTGCCTGTGAATCCTCAGGTCCATTTCAGCAACCCACTTTTGCAT GCTGTACCTTTGATATCATCTGAAACTGCTTACATTGTCTCCGGTATCAGAATCTAACAGTATATGCTGATCTCC ACGTTCTAGCAAATTTTGTTTACCAGCAATAATAGGAGCAACCTGCTCTCGAGAGTCCATATTCTGATCCCTAAA TGTATTAGAGCCACAGTGGGGCCTGGAACACTGCCTTAACACCTGGGCTAAGTCCTCTTATATCTCGTAGTGAAC ACCITATGTATGTAAGGTGTCCCCAGCCCCGGGCCACAAACGGGTACCAGCCCATGGCCTGTTAGGAACCGGGC TACACAGCAAGAAGTGAATCTCTGGCAAGCCAGGGAAGCTTAATCTGTATTTACAGCTGCTCCCCATGGTTCACA TTATCGTCTGAGCTCCACCTCCTGTCAGATCAGCTGTGGCATGAGATTCTCATAGGAGCTGGAACTACTGTGAAC TAGGCATGAGAGGGATCTAGGTTATGCTCCTTATGAGAATCTAATGCCTGATGATCTGTCACTGTCTCCCATCAC ${\tt CCCCAGATGGGACCATCTAGTTGCAGGAAAATAAGCTCAGGGCTCCCACCGATTCTACATTATGGTGAGTTGTGT}$

MALLPSLQSLDLGLELGDFRRGSIVRDPGHSIQNLTTGKREGDPSSRGQISQGTRVFPPRPHSQRGVSDEWENLK YGSEIMQVRTLALGENS

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1187/6881 FIGURE 1107

MVHIACKIAELKEKIDCRSGKKPEDCPKFLKSDDAAIIDMVPGKPMCVESFSELFVSIGHLSLVVKDWLMITMHH KTFRWKGECFVDHFGFLFCIWQF

MSGALDVLQMKEEDVLKFLAAGTHLGGTNLDFQMEQYIYKRKSDGIYIINLKRTWEKLLLAARAIVAIENPADVS VISSRNTGQRAVLKFAAATGATPIAGRFTPGTFTNQIQAAFREPRLLVVTDPRADHQPLTEASYVNLPTIALCNT DSPLRYVDIAIPCNNKGAHSVGLMWWMLAREVLRMRGTISREHPWEVMPDLYFYRDPEEIEKEEQAAAEKAVTKE EFQGEWTAPAPEFTATQPEVADWSEGVQVPSVPIQQFPTEDWSAQPATEDWSAAPTAQATEWVGATTDWS

 ${\tt MVFRRFVEVGRVAYVSFGPHAGKLVAIVDVIDQNRALVDGPCTQVRRQAMPFKCMQLTDFILKFPHSAHQKYVRQAMQKADINTKWAATRWAKKIEARERKAKMTDFDRFKVMKAKKMRNRIIKNEVKKLQKAALLKASPKKAPGTKGTAAAAAAAAAAKVPAKKITAASKKAPAQKVPAQKATGQKAAPAPKAQKGQKAPAQKAPAPKASGKKA$

GACTCCTAGGGGCTTGCAGACTAGTGGGAGAGAAAGAACATCGCAGCCAGGCAGAACCAGGACAGGTGAGGT GCAGGCTGGCTTTCCTCTCGCAGCGCGGTGTGGAGTCCTGTCCTGCCTCAGGGCTTTTCGGAGCCTGGATCCTCA TGAATAAAGGGGCGCAGGCCAAGTGGCAGAGCCTTCGTTTGCCAAGTCGCCTCCAGACCGCAGACATGA GGTGCGCCGTATCCCAACCCGAGGCCACAAAATGCTTCCAATGGCAAAGGAATATGAGAAAAGTGCGTGGCCCTC CTGTCAGCTGCATAAAGAGAGACTCCCCCATCCAGTGTATCCAGGCCATTGCGGAAAACAGGGCCGATGCTGTGA CCCTTGATGGTGGTTTCATATACGAGGCAGGCCTGGCCCCCTACAAACTGCGACCTGTAGCGGCGGAAGTCTACG GGACCGAAAGACAGCCACGAACTCACTATTATGCCGTGGCTGTGGTGAAGAAGGGGCGGCAGCTTTCAGCTGAACG TTCCCGGTGCAGATAAAGGACAGTTCCCCAACCTGTGTCGCCTGTGTGCGGGGACAGGGGAAAACAAATGTGCCT TCTCCTCCCAGGAACCGTACTTCAGCTACTCTGGTGCCTTCAAGTGTCTGAGAGACGGGGCTGGAGACGTGGCTT TTATCAGAGAGCACAGTGTTTGAGGACCTGTCAGACGAGGCTGAAAGGGACGAGTATGAGTTACTCTGCCCAG ACAACACTCGGAAGCCAGTGGACAAGTTCAAAGACTGCCATCTGGCCCGGGTCCCTTCTCATGCCGTTGTGGCAC GAAGTGTGAATGGCAAGGAGGATGCCATCTGGAATCTTCTCCGCCAGGCACAGGAAAAGTTTGGAAAGGACAAGT CACCGAAATTCCAGCTCTTTGGCTCCCCTAGTGGGCAGAAAGATCTGCTGTTCAAGGACTCTGCCATTGGGTTTT $\tt CGAGGGTGCCCCCGAGGATAGATTCTGGGCTGTACCTTGGCTCCGGCTACTTCACTGCCATCCAGAACTTGAGGA$ AAAGTGAGGAGGAAGTGGCTGCCCGGCGTGCGCGGGTCGTGTGGTGTGCGGTGGGCGAGCAGGAGCTGCGCAAGT GTAACCAGTGGAGTGGCTTGAGCGAAGGCAGCGTGACCTGCTCCTCGGCCTCCACCACAGAGGACTGCATCGCCC TGCCTGTCCTGGCAGAGAACTACAAATCCCAACAAAGCAGTGACCCTGATCCTAACTGTGTGGATAGACCTGTGG AAGGATATCTTGCTGTGGCGGTGGTTAGGAGATCAGACACTAGCCTTACCTGGAACTCTGTGAAAGGCAAGAAGT CCTGCCACACCGCCGTGGACAGGACTGCAGGCTGGAATATCCCCATGGGCCTGCTCTTCAACCAGACGGGCTCCT GCAAATTTGATGAATATTTCAGTCAAAGCTGTGCCCCTGGGTCTGACCCGAGATCTAATCTCTGTGCTCTGTGTA TTGGCGACGAGCAGGGTGAGAATAAGTGCGTGCCCAACAGCAACGAGAGATACTACGGCTACACTGGGGCTTTCC GGTGCCTGGCTGAGAATGCTGGAGACGTTGCATTTGTGAAAGATGTCACTGTCTTGCAGAACACTGATGGAAATA ACAATGACGCATGGGCTAAGGATTTGAAGCTGGCAGACTTTGCGCTGCTGTGCCTCGATGGCAAACGGAAGCCTG GCCTGAAACAGGTGTTGCTCCACCAACAGGCTAAATTTGGGAGAAATGGATCTGACTGCCCGGACAAGTTTTGCT TATTCCAGTCTGAAACCAAAAACCTTCTGTTCAATGACAACACTGAGTGTCTGGCCAGACTCCATGGCAAAACAA TGGAAGCCTGTGAATTCCTCAGGAAGTAAAACCGAAGAAGATGGCCCAGCTCCCCAAGAAAGCCTCAGCCATTCA TGCTTACAATTCCCTGCTGTCGTCTTAGCAAGAAGTAAAATGAGAAATTTTGTTGATATTC

GCTTCTAAACAACCTACCCTCCTTCCCCATTTTCTGTGGTCCAACTACCCTCGGCGATCCCAGGCTTGGCGGGGC CCATCAAAATGAAGTTATTAATTATATGCGTTTTGCTCGTTCAAAGAGAGGCTTGAGACTCAAAACTGTAGATTC CTGCTTCCAAGACCTCAAGGAGAGCAGGCTGGTGGAGGACACCTTCACCATAGATGAAGTCTCTGAAGTCCTCAA TGGATTACAAGCTGTGGTTCATAGTGAGGTGGAATCTGAGCTCATCAACACTGCCTATACCAATGTGTTACTTCT AAAGCCAAAACTTGCTCCACTTAATGAAGGTGGAACAGCAGAACTCCTAAACAAGGAAATTTTAAGACTTCAAGA AGAGAATGAGAAATTGAAGTCAAGGTTGAAGACCATTGAAATACAGGCTACAAATGCACTGGATGAAAAGTCAAA ACTAGAAAAAGCACTGCAAGATTTACAGCTTGATCAAGGAAATCAAAAGGATTTTATAAAGGCCCAAGACTTAAG TAACTTAGAAAACACTGTCGCTGCCTTAAAGAGTGAGTTTCAGAAGACACTTAATGACAAGACAGAAAAACCAGAA GTCACTGGAGGAGAATCTGGCGACAGCCAAGCACGATCTACTCAGGGTTCAGGAGCAGCTGCACATGGCTGAAAA GGAATTAGAAAAGAAATTTCAGCAAACAGCAGCTTATCGAAACATGAAAGAGATTCTTACCAAGAAGAATGACCA AATCAAAGATCTGAGGAAAAGACTGGCACAATATGAACCTGAAGAT<u>TAA</u>AACTGAAGATTTCCTCTGGAAGCTAC CACATGCAAACATACAAGCAGTCTCACCTCAGGCATGTATTTTGAAAAGCATTTTGTCATATCCCCTCTCCTTAT TTTTCTAATATTTAGACTTTGAATATTTAGAACTAGAGTTCCTATTTTCAGCTAGTTGAAAACAGAGAAAACCTA GTGATTCTGTCTGGTCATCCCACACCCTCTCTACTGAGTGCTCCAGAGTCTTAGCTCACATGCACTGAGAATTC TTTACAGCAAAGAAGAGATTTTTAGAGTGGGAAGAAGAGGCTTATCCTTCTGCATTAGTATAAAGAGTCTGTATT AATTCATTTACTCTATTTGATGATAAACTATAAATTCATTGAAAATGTGAATTCTATTATGGGTAGCCTTTTTAC CAATTATAAGGAAAATTTACAGCAGTGAACATGAACATTCACTTAGCTTCCTCAGTCTCCCATCTTAAAGATCA TTTATCAGAGGAGGTTCAGCATTTTTTGCAGCATAACTTTTCATGAGTCTGTATTACTAATGGATAAGTCAAATC CATCCTGCACTTCTACAGTTTAGAAAGTATCTGGACTCAGAATAAATGTAATATTTATACTTGTTTCCAGAATGT TATTTTACATTTTATGTTCAATAAGAACACTTTTTAAAAGACGTATATTCAACATAAAATCAGCTATCAGACTTC AGATTAGACTTTATTTATGTGGGTCTATAATAATTGTATTTTCAAGAGGTTTTCACTATATTTGTATTGGCCTGG TTTTCTCAGACGATTTTGGACAAATCATTAGAAACTGGGCATCATATCCACAGTTATGTAAGGCAGTGATATACT ATAAGGATAAACAAAGTCAAGTCCATAAAGCAATAATCCCTCAGAAGGAAAGTCCTTACTTTTCACATATTAATA TTTAGTAATTTTTCCTGCTTCTAAAAGTGAGAGTATCACACCCTAAATGAACACTGTCTACTAAGAGACATCATT CCATTTCCACAAATGAAGATTTTATTCCAAGAAACGAGTTTACTGATTGGAGCATAGGGCTTGTTGTTATTTTTA TTCAAGCTTTTAGTAATAGCCTTGAATTTATTATTTTTCTTATAGGCTTTTTGTTAAAATAGTGAAGGAACAAAT GTTAAAGGGTAAGATAATTTCCCTGCAAAAGGACACAGAAGGCAGTCTTAAGAAGATGAATGGATGAGAAGAGGG AGAGAATAAAATGCAATAACGAGCCAGCATTTACTATGTATTTTCTCCTCACCTGTCTCTCCATATTTAGGTCAC TTACCAGTTTCTGTGCCCTTTTGGAGCTTTTGTTGAGGGCTTCATTCTCACCCTGTATTTCTTTAGCCCTAAATT GACACTCTCTCCAAAAATCCATTCCATTGTCTGTGGACCAAGATGTTCTATGTAATTCAGAAGCAGAACTCTTGG CTAAAGGGCTAGTGTGGCCTTCAGAAACCATTCAATTATTTTCTCCCTACACCTTTGTCAGTTTGAAACCAGTGA GGAAAAAAGGTATGTTGATAAGAAACCTATATTGCTAGGTAGAATTTGTACTTGTTTTCTTGGTAGCAGTTTTGA AATATTCTGTACAGTACGTTCCTATTGTTTAATAATAAATTCAAAAATATTCTAAAACCTTAAAACCAACTATG CCAAGCATTAAGATAAACAAATATGATGTTCTTTGACGTAAATCAACGTGATGATTCTTTCACATGTAAACACAT TTTAGTGTTTCTGGTTTGTCATTTTTGTTGTTGTTGTTGTTGTTATTTACTCTATACCCTTTAGCAAAATAC TTTCATATATATATATTGGATTTCTAAGGATGGTGGTTTGAGCCTTGATTAGACTTTTGATGTGCTAAGCCAG ACAGGCAGTCTGTACATTGATGGCCATCACAATGCAGCTTTGGTTTAATTTAATTCAGGCCTGCTGCTGAGTTAT GCACAGACTTTTTGTTGACCAAAATAAAATATAAAAGGGTTTTCTTCTGTTTGACATTTGTGTTCATTTTTCTCT TTATGTATTACATTTTAACCTATATTAAATAAATGTTTAAATGATAATTTGCTTATGTCTTATAAAACTCAGCAT AAGAAAAAT

MAELGLNEHHQNEVINYMRFARSKRGLRLKTVDSCFQDLKESRLVEDTFTIDEVSEVLNGLQAVVHSEVESELIN TAYTNVLLLRQLFAQAEKWYLKLQTDISELENRELLEQVAEFEKAEITSSNKKPILDVTKPKLAPLNEGGTAELL NKEILRLQEENEKLKSRLKTIEIQATNALDEKSKLEKALQDLQLDQGNQKDFIKAQDLSNLENTVAALKSEFQKT LNDKTENQKSLEENLATAKHDLLRVQEQLHMAEKELEKKFQQTAAYRNMKEILTKKNDQIKDLRKRLAQYEPED

MASVTLSEAEKVYIVHGVQEDLRVDGRGCEDYRCVEVETDVVSNTSGSARVKLGHTDILVGVKAEMGTPKLEKPN EGYLEFFVDCSASATPEFEGRGGDDLGTEIANTLYRIFNNKSSVDLKTLCISPREHCWVLYVDVLLLECGGNLFD AISIAVKAALFNTRIPRVRVLEDEEGSKDIELSDDPYDCIRLSVENVPCIVTLCKIGYRHVVDATLQEEACSLAS LLVSVTSKGVVTCMRKVGKGSLDPESIFEMMETGKRVGKVLHASLQSVVHKEESLGPKRQKVGFLG

 ${\tt VPKRKAEGDAKGDKAKVKDEPQRRSMRFSAKPAPPKPEPKPKKAPAKKGEKIPKGKKGKADAGEEGNNPAENGDAKTDQAQKAEGAGGAK}$

GGTCTGAGGAGCAGCTTCAGTCCCCGCCGAGCCGCCACCGCAGGTCGAGGACGGTCGGACTCCCGCGGGGGAGG AGCCTGTTCCCCTGAGGGTATTTGAAGTATACCATACAACTGTTTTGAAAATCCAGCGTGGACAATGGCTACTCA TTACCTGGACTCTGGAATCCATTCTGGTGCCACTACCACAGCTCCTTCTCTGAGTGGTAAAGGCAATCCTGAGGA AGAGGATGTGGATACCTCCCAAGTCCTGTATGAGTGGGAACAGGGATTTTCTCAGTCCTTCACTCAAGAACAAGT AGCTGATATTGATGGACAGTATGCAATGACTCGAGCTCAGAGGGTACGAGCTGCTATGTTCCCTGAGACATTAGA TGAGGGCATGCAGATCCCATCTACACAGTTTGATGCTGCTCATCCCACTAATGTCCAGCGTTTGGCTGAACCATC ACAGATGCTGAAACATGCAGTTGTAAACTTGATTAACTATCAAGATGATGCAGAACTTGCCACACGTGCAATCCC TGAACTGACAAAACTGCTAAATGACGAGGACCAGGTGGTGGTTAATAAGGCTGCAGTTATGGTCCATCAGCTTTC TACAAATGATGTAGAAACAGCTCGTTGTACCGCTGGGACCTTGCATAACCTTTCCCATCATCGTGAGGGCTTACT GGCCATCTTTAAGTCTGGAGGCATTCCTGCCCTGGTGAAAATGCTTGGTTCACCAGTGGATTCTGTGTTTTTA TGCCATTACAACTCTCCACAACCTTTTATTACATCAAGAAGGAGCTAAAATGGCAGTGCGTTTAGCTGGTGGGCT GCAGAAAATGGTTGCCTTGCTCAACAAAACAAATGTTAAATTCTTGGCTATTACGACAGACTGCCTTCAAATTTT AGCTTATGGCAACCAAGAAAGCAAGCTCATCATACTGGCTAGTGGTGGACCCCAAGCTTTAGTAAATATAATGAG GCCGGCTATTGTAGAAGCTGGTGGAATGCAAGCTTTAGGACTTCACCTGACAGATCCAAGTCAACGTCTTGTTCA GAACTGTCTTTGGACTCTCAGGAATCTTTCAGATGCTGCAACTAAACAGGAAGGGATGGAAGGTCTCCTTGGGAC TGGTGACAGGGAAGACATCACTGAGCCTGCCATCTGTGCTCTTCGTCATCTGACCAGCCGACACCAAGAAGCAGA GCCTCTGATAAAGGCTACTGTTGGATTGATTCGAAATCTTGCCCTTTGTCCCGCAAATCATGCACCTTTGCGTGA GCAGGGTGCCATTCCACGACTAGTTCAGTTGCTTGTTCGTGCACATCAGGATACCCAGCGCCGTACGTCCATGGG TGGGACACAGCAGCAATTTGTGGAGGGGGTCCGCATGGAAGAAATAGTTGAAGGTTGTACCGGAGCCCTTCACAT TTCTCCCATTGAAAACATCCAAAGAGTAGCTGCAGGGGTCCTCTGTGAACTTGCTCAGGACAAGGAAGCTGCAGA TGCAGCTGCTGTTTTGTTCCGAATGTCTGAGGACAAGCCACAAGATTACAAGAAACGGCTTTCAGTTGAGCTGAC CAGCTCTCTCTCAGAACAGAGCCAATGGCTTGGAATGAGACTGCTGATCTTGGACTTGATATTGGTGCCCAGGG AGAACCCCTTGGATATCGCCAGGATGATCCTAGCTATCGTTCTTTTCACTCTGGTGGATATGGCCAGGATGCCTT GGGTATGGACCCCATGATGGAACATGAGATGGGTGGCCACCCCTGGTGCTGACTATCCAGTTGATGGGCTGCC AGATCTGGGGCATGCCCAGGACCTCATGGATGGGCTGCCTCCAGGTGACAGCAATCAGCTGGCCTGGTTTGATAC TGACCTGTAAATCATCCTTTAGCTGTATTGTCTGAACTTGCATTGTGATTGGCCTGTAGAGTTGCTGAGAGGGCT CGAGGGGTGGGCTGGTATCTCAGAAAGTGCCTGACACACTAACCAAGCTGAGTTTCCTATGGGAACAATTGAAGT AAACTTTTTGTTCTGGTCCTTTTTGGTCGAGGAGTAACAATACAAATGGATTTTGGGAGTGACTCAAGAAGTGAA CAGTAACTGTTTTTTAAGTCTCTCGTAGTGTTAAGTTATAGTGAATACTGCTACAGCAATTTCTAATTTTTAAGA TAGCCTTTTTGTATAAAATAGACAAATAGAAAATGGTCCAATTAGTTTCCTTTTTAATATGCTTAAAATAAGCAG TTTGGAACCTTGTTTTGGACAGTTTACCAGTTGCCTTTTATCCCAAAGTTGTTGTAACCTGCTGTGATACGATGC TTCAAGAGAAAATGCGGTTATAAAAAATGGTTCAGAATTAAACTTTTAATTCATT

GGGACTGCGAGCCAGGGACTCGGGCCGCGGGGCGGAAGAAGTGGGGCAGCCCTTGGCCAGGCCGAAAGGACTTT
GGGGGTGGGGGCTGGGAGTCCGTGTCTCGAATGAGGGAGAGGTGGAGTTGCCGGGGCTCAGGCCCGGCCTCG
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CCACATGCGTGTGGCAGCCCAAGGCTTTGTTGTAGGAGCAATGACTGTTGGTATGGGCTATTCCATGTATCGGGA
ATTCTGGGCCTTTAGTTAGATGTCTTATTATAAAGTTACCTATTATTGTTGGAAATAAACTAATTTGTATGGGT
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GTGACTAGTTTACTAACTAGGTCATTCAAGGAAGTCAAGTTAACTTAAACATGTCACCTAAATGCACTTGATGGT
GTTGAAATGTCCACCTTCTTAAATTTTTAAGATGAACTTAGTTCTAAAGAAGATAACAGGCCAATCCTGAAGGTA
CTCCCTGTTTGCTGCAGAATGTCAGAT

PCT/US2003/028547

1202/6881 FIGURE 1122A

AGTTGCAGCGGCCGGGAAGATGGTGGAGGACGGCGCGGAGGAGCTGGAGGATCTGGTGCACTTCTCCGTGTCTG AGTTGCCTAGTCGCGGCTACGGCGTCATGGAGGAGATCCGGCGGCAGGGCAAGCTGTGCGACGTGACCCTCAAGA TTGGGGACCACAAATTCAGTGCCCACCGGATTGTCTTAGCAGCCTCGATCCCGTATTTCCATGCTATGTTTACAA ATGACATGATGGAGTGCAAGCAGGATGAGATTGTAATGCAAGGAATGGACCCAAGTGCCCTGGAGGCTCTGATCA AGCTGCAGAGCATCAAAGACGCCTGCTGCACATTCCTTCGAGAACGGCTTCACCCAAAAAAACTGCCTGGGTGTGC GCCAGTTTGCTGAGACAATGATGTGTGCTGTGCTGTACGACGCTGCCAACAGCTTCATCCACCAGCACTTTGTGG AGGTGTCCATGTCAGAAGAGTTCCTGGCCCTGCCCTTGGAAGACGTGCTTGAGCTGGTGTCTCGGGATGAGCTGA ATGTCAAATCTGAGGAGCAGGTCTTTGAAGCTGCATTGGCCTGGGTCAGATACGACCGGGAGCAGAGGGGTCCCT GGGGCCTCAACTCAGCAGGTGATTCCCTGAATGTGGTGGAAGTGTTCGACCCCATTGCCAATTGCTGGGAGAGAT GCCGTCCCATGACAACAGCCCGCAGCCGCGTTGGCGTGGCTGTGGTGAACGGGCTTCTCTATGCCATCGGAGGAT TGAATAGCAAGAGAAGTGCCATGGGGACAGTCGTGCTGGATGGCAGATCTACGTCTGTGGGGGCTACGATGGCA ACTCTTCCCTCAGCTCCGTGGAGACCTACTCACCTGAGACGGACAAATGGACAGTGGTGACCTCGATGAGCTCGA ATCGCAGTGCTGCGGGTTACAGTCTTTGAGGGCAGGATATATGTGTCAGGCGGCCATGATGGTTTGCAGATCT TCAGCAGTGTGGAACACTACAACCACCACACACCCTGGCACCTGCAGCTGGCATGCTCAACAAGCGCTGCC GGCACGGAGCCCCCCCGGGGAGCAAGATGTTTGTCTGCGGGGGGCTACGATGGCTCTGGCTTCCTCAGCATTG TGGTGGCCAGCTGTGGGCGCCTCTACGCTGTTGGGGGCTACGACGGACAGTCAAACCTAAGCTCAGTGGAGATGT TCCCTCTCCTCACCATCTAAGGCAGAGGATGGGATGTGGTGGGGGCAGGGATCTGGTACAGACATAGGCGCTTCCT TCCAGGAACAGTCCCTCAGGAGAGGCAGTGGACCAGAAGAGATGGCGAAACGTGAGCTCGCCGGAGGTACAGTTT TTCCAGGTGCTTAAGCCCTCCCCCACTGTGCCACCCTTGTGACCTTCAGGCTTGGGTCATCAAGATGCACAGCAT GGAACACAAGCTCCTCTGGATCCTGCAGCTGGTGACATGGAACTGTTTTCTGGTCCACATGAACACAGGCTCCAT CCAGGCCCAGCTCCTACCCACCGCCTCTCTGTGGGCCAGCTGTTCACAGAAGGCCTTCCATCTGATGCTCCCCAT CGCCTGCTTGCTCCCAGCCGAGTCTGGCCAATTTGCCATGGGGAGGCTGCAGTGTCCAAGCCTGCTGGAAACTG CTGCACACAGGCACATTCCTTCCTCCACAGTGGGGCACCAAGGATTCTGTCCTCATTGCTGGGTAAGCAGGGAGA AGAGAAGTTTTCCCCATGTCTAATTTTGGGATTTCAGTGAGGCCTTTTGATCTGTCCAGGAGAACAGAAGGGAAA TTTTATGTGAACAAATTTTGCAAGAAGAAAAAAGCATAAAAGACACTAACGGCAAATCTATGTTTAAATGGAAAA TCGTCTAACTGGAGAAGGGCGGTATCCACCCCACATTCGGATCCCAGGGTCCTGAGGCCTCGCATTGAGCTGGGG GTTCCCTCTGAGCCCCAGTGTGTGGGAATCAGTGCACTCTTGACTGGGCCTGTAGTAAGGTGCTCATGGGGTTT GTCTTCTCACCCACCATCAGAGGACTTTTAAAATCATAGGCGTAGAGAGTTAGGCTATCTGCTGAATTACTGCCA CTCTTCTTGGTGGGGGCTCCTAGCTGTGGCTGGGGGCCCCCTGTGATTACCTCCTACTGCCACCATG GCGCTCATTCAGATTCCCCACTCTCACTAACATTGCTTCCTTTTTTGACCAGCAGGAAACAGCAGGTCTGGCCAG ATTCTCACTTGCCCATCAATCTCGTTCTTGGATGATTTCCCTCATTGTGATGCTTCTGGGGGCACGTTGACCATAT CAAGGTGGACCTTTACATTCAAGCACAGCTGGCTTTTATGACATAAAGAACTAAAGGCCGAAAGAATCTCTTGCT GCTGCAAAGAACAGATTTTATATTTCTTCCTCTAATCTTGGCAAATGACCTTTACCTTTTGGAAAGATTTCATAT TGCTTCCTCCCTGGATAGGACCTAATGTAGCACAGCGGGACTCAAAGAGGAGGACATTTTCTCTTGCCAGTG CACTGGGCAGTGGGGCTGTCCTTCAACTGCTGCCCAAAATTGGTTTTCTAAAATTCTTCCAGTAGAGACTAAA AGAAGATTCAATTCCTGTAACCCAAGACTGAGTCTTAGGGCTCCAGTCTCCACCTGCTTGGTTTCCTATCCTTTG

1203/6881 FIGURE 1122B

1204/6881 FIGURE 1123A

GTCGCCGCCGCCGCCGCCGCCGCAGCTTGGGAGGTGCTGCCACCACAGGTACCTGCACATGTTGTTCTTTGTCAG TGCTGTCAAGTGTGCCAGGGTGATCCATGGTCACTTTCCGGGATGGCAGCAAGGTGACTTCGGCTGAGGATGA CCCTGACTGAAAGGCTGCGTGAGAAGATATCTCGGGCCTTCTACAACCATGGGCTCCTCTGTGCATCCTATCCCA TCCCCATCATCCTCTCACAGGGTTCTGCATCTTAGCCTGCTACCCACTGCTGAAACTCCCCTTGCCAGGAA CAGGACCTGTGGAATTCACCACCCCTGTGAAGGATTACTCGCCCCCACCTGTGGACTCTGACCGCAAACAAGGAG AGCCTACTGAGCAGCCTGAGTGGTATGTGGGTGCCCCGGTGGCTTATGTCCAGCAGATATTTGTGAAGTCCTCAG TGTTTCCCTGGCACAAGAACCTCCTGGCAGTAGATGTATTTCGTTCACCTTTGTCCCGGGCATTCCAACTGGTGG AGGAGATCCGGAACCACGTGCTGAGAGACAGCTCTGGGATCAGGAGCTTGGAGGAGTTGTGTCTGCAAGTGACCG TCTGGCAGAATGACTGGGAACGCTTCCATGCTGATCCTGACATCATTGGGACCATCCACCAGCACGAGCCTAAAA CCAGGAAGAGGATGGTCTCCTACACCATCACCCTGGTCTTCCAGCACTACCATGCCAAGTTCCTGGGCAGCCTGC GTGCCCGCCTGATGCTTCTGCACCCCAGCCCCAACTGCAGCCTTCGGGCGGAGAGCCTGGTCCACGTGCACTTCA AGGAGGAGATTGGTGTCGCTGAGCTCATCCCCCTTGTGACCACCTACATCTTGTTTGCCTACATCTACTTCT CCACGCGGAAGATCGACATGGTCAAGTCCAAGTGGGGGGCTGGCCTGGCTGCCGTGGTCACAGTGCTCAGCTCGC TGCTCATGTCTGTGGGACTCTGCACACTCTTCGGCCTGACGCCCACCCTCAATGGCGGCGAGATTTTCCCCTACC TTGTGGTGGTTATTGGGTTAGAGAATGTGTTGGTGCTCACCAAGTCTGTGGTCTCAACCCCGGTAGACCTGGAGG TGAAGCTGCGGATCGCCCAAGGCCTAAGCAGCGAGAGCTGGTCCATCATGAAGAACATGGCCACGGAGCTGGGCA TCATCCTCATCGGCTACTTCACCCTAGTGCCCGCCATCCAGGAGTTCTGTCTCTTTGCTGTCGTGGGGCTGGTGT CTGACTTCTTCCTTCAGATGCTGTTTTTCACCACTGTCCTGTCCATTGACATTCGCCGGATGGAGCTAGCAGACC TGAACAAGCGACTGCCCCTGAGGCCTGCCCTCAGCCAAGCCAGTGGGACAGCCAACGCGCTACGAGCGGC GGATTGGCATCCTGGTATACACAGACCCAGCAGGGCTGCGCAACTACCTCGCTGCCCAGGTGACGGAACAGAGCC CATTGGGTGAGGGAGCCCTGGCTCCATGCCCGTGCCTAGTGGCATGCTGCCCCCAGCCACCCGGACCCTGCCT TCTCCATCTTCCCACCTGATGCCCCTAAGCTACCTGAGAACCAGACGTCGCCAGGCGAGTCACCTGAGCGTGGAG GTCCAGCAGAGGTTGTCCATGACAGCCCAGTCCCAGAGGTAACCTGGGGGGCCTGAGGATGAGGAACTTTGGAGGA AATTGTCCTTCCGCCACTGGCCGACGCTCTTCAGCTATTACAACATCACACTGGCCAAGAGGTACATCAGCCTGC TGCCCGTCATCCCAGTCACGCTCCGCCTGAACCCGAGGGGGGGCTCTGGAGGGCCGGCACCCTCAGGACGGCCGCA GTGCCTGGCCCCACCGGGGCCCATACCTGCTGGGCACTGGGAAGCAGGACCCAAGGGCCCAGGTGGGGTGCAGG CCCATGGAGACGTCACGCTGTACAAGGTGGCGGCGCTGGGCCTGGCCACCGGCATCGTCTTGGTGCTGCTGC TCTGCCTCTACCGCGTGCTATGCCCGCGCAACTACGGGCAGCTGGGTGGTGGGCCCCGGGCGGCGGAGGCGCGGGG AGCTGCCCTGCGACGACTACGGCTATGCGCCACCCGAGACGGAGATCGTGCCGCTTGTGCTGCGCGGCCACCTCA TGGACATCGAGTGCCTGGCCAGCGACGGCATGCTGCTGGTGĀGCTGCTGCCTGGCAGGCCACGTCTGCGTGTGGG ACGCGCAGACCGGGGATTGCCTAACGCGCATTCCGCGCCCAGGGCAGCGCCCGGGACAGTGGCGTGGGCAGCGGGC TTGAGGCTCAGGAGAGCTGGGAACGACTTTCAGATGGTGGGAAGGCTGGTCCAGAGGAGCCTGGGGACAGCCCTC CCCTGAGACACCGCCCCGGGGCCCTCCGCCGCCTTCCCTCTTCGGGGACCAGCCTGACCTCACCTGCTTAATTG ACACCAACTTTTCAGCGCAGCCTCGGTCCTCACAGCCCACTCAGCCCGAGCCCCGGCACCGGGCGGTCTGTGGCC GCTCTCGGGACTCCCCAGGCTATGACTTCAGCTGCCTGGTGCAGCGGGTGTACCAGGAGGAGGGGCTGGCGGCCG TCTGCACACCAGCCCTGCGCCACCCTCGCCTGGGCCGGTGCTGTCCCAGGCCCCTGAGGACGAGGGTGGCTCCC CCGAGAAAGGCTCCCCTTCCCTCGCCTGGGCCCCCAGTGCCGAGGGTTCCATCTGGAGCTTGGAGCTGCAGGGCA ACCTCATCGTGGTGGGGCGGAGCAGCGGCCGGCTGGAGGTGTGGGACGCCATTGAAGGGGTGCTGCTGCAGCA GCGAGGAGGTCTCCTCAGGCATTACCGCTCTGGTGTTCTTGGACAAAAGGATTGTGGCTGCACGGCTCAACGGTT CCCTTGATTTCTTCTCCTTGGAGACCCACACTGCCCTCAGCCCCCTGCAGTTTAGAGGGACCCCAGGGCGGGGCA GTTCCCCTGCCTCCCAGTGTACAGCAGCAGCACACAGTGGCCTGTCACCTGACCCACACAGTGCCCTGTGCAC ACCAAAAACCCATCACAGCCCTGAAAGCCGCTGCTGGGGGGCGCTTGGTGACTGGGAGCCAAGACCACACTGAGAG TGTTCCGTCTGGAGGACTCGTGCTGCCTCTTCACCCTTCAGGGCCCACTCAGGGGCCATCACGACCGTGTACATTG

FIGURE 1123B

 ${\tt MTLTERLREKISRAFYNHGLLCASYPIPIILFTGFCILACCYPLLKLPLPGTGPVEFTTPVKDYSPPPVDSDRKQ}$ GEPTEQPEWYVGAPVAYVQQIFVKSSVFPWHKNLLAVDVFRSPLSRAFQLVEEIRNHVLRDSSGIRSLEELCLQV TDLLPGLRKLRNLLPEHGCLLLSPGNFWQNDWERFHADPDIIGTIHQHEPKTLQTSATLKDLLFGVPGKYSGVSL YTRKRMVSYTITLVFQHYHAKFLGSLRARLMLLHPSPNCSLRAESLVHVHFKEEIGVAELIPLVTTYIILFAYIY FSTRKIDMVKSKWGLALAAVVTVLSSLLMSVGLCTLFGLTPTLNGGEIFPYLVVVIGLENVLVLTKSVVSTPVDL EVKLRIAQGLSSESWSIMKNMATELGIILIGYFTLVPAIQEFCLFAVVGLVSDFFLQMLFFTTVLSIDIRRMELA $\tt DLNKRLPPEACLPSAKPVGQPTRYERQLAVRPSTPHTITLQPSSFRNLRLPKRLRVVYFLARTRLAQRLIMAGTV$ VWIGILVYTDPAGLRNYLAAQVTEQSPLGEGALAPMPVPSGMLPPSHPDPAFSIFPPDAPKLPENQTSPGESPER GGPAEVVHDSPVPEVTWGPEDEELWRKLSFRHWPTLFSYYNITLAKRYISLLPVIPVTLRLNPREALEGRHPQDG ${\tt RSAWPPPGPIPAGHWEAGPKGPGGVQAHGDVTLYKVAALGLATGIVLVLLLLCLYRVLCPRNYGQLGGGPGRRRR}$ GELPCDDYGYAPPETEIVPLVLRGHLMDIECLASDGMLLVSCCLAGHVCVWDAQTGDCLTRIPRPGQRRDSGVGS GLEAQESWERLSDGGKAGPEEPGDSPPLRHRPRGPPPPSLFGDQPDLTCLIDTNFSAQPRSSQPTQPEPRHRAVC ${\tt GRSRDSPGYDFSCLVQRVYQEEGLAAVCTPALRPPSPGPVLSQAPEDEGGSPEKGSPSLAWAPSAEGSIWSLELQ}$ GNLIVVGRSSGRLEVWDAIEGVLCCSSEEVSSGITALVFLDKRIVAARLNGSLDFFSLETHTALSPLQFRGTPGR ${\tt GSSPASPVYSSSDTVACHLTHTVPCAHQKPITALKAAAGRLVTGSQDHTLRVFRLEDSCCLFTLQGHSGAITTVY}$ IDQTMVLASGGQDGAICLWDVLTGSRVSHVFAHRGDVTSLTCTTSCVISSGLDDLISIWDRSTGIKFYSIQQDLG CGASLGVISDNLLVTGGQGCVSFWDLNYGDLLQTVYLGKNSEAQPARQILVLDNAAIVCNFGSELSLVYVPSVLE

 $\tt GTTCTCTTCGCCCGGTCCCTGCCGCGCACAGGCCTCGGGGGTCGGCGGAGCACG{\color{red} \underline{ATG}} GCGGCCGCTAGGAGACTC$ ATGGCGCTGGCCGCCGCATCTCTCCGCGCCTGCAGCCGCTGGGTCCCCGCGCTGCTGGGCGACAGGGTCGCTCG CGCGGCTTCTCTCAAGCTGCGCCCACCCCGACCACACCAAGGAAGCCGCCGAGGCCGAGTCAGGGATGGCCCCC GGCGGGCCTGGGGAAGGCGAAGCTTGGTGAACGCTTCTAGGGACCTATTAAAAGAGTTCCCACAGCCCAAA AATCTTCTCAACAGTGTGATTGGAAGAGCCCTCGGCATCTCACATGCAAAAGACAAACTAGTCTACGTGCACACA AATGGACCGAAGAAAAAGAAAGTCACACTGCACATAAAATGGCCCAAGAGCGTGGAGGTAGAAGGCTATGGCAGC AAGAAGATCGATGCTGAGCGGCAGGCTGCAGCCTGCCAGCTGTTCAAGGGTTGGGGGTCTGCTAGGTCCC CGGAATGAGTTGTTTGACGCAGCCAAATACCGAGTGCTAGCTGATCGCTTTGGCTCCCCTGCCGACAGCTGGTGG CGTCCGGAACCCACCATGCCCCTACTTCCTGGCGGCAGCTGAATCCAGAGAGTATTCGACCAGGGGGACCTGGG GGCCTATCCCGCTCTTTAGGCCGGGAAGAAGAGGGAGGACGAGGAGGAAGAGCTAGAAGAAGGGACCATAGATGTT ACCGACTTCTTGTCCATGACCCAGCAGGATTCCCACGCTCCACTCAGGGGACTCAAGGGGGAGTTCCTTTGAGATG ACAGATGACGACAGTGCCATTAGGGCTCTGACCCAGTTTCCACTTCCCAAGAACCTTCTGGCCAAGGTGATTCAG ATTGCAACGTCATCCTCCACAGCTAAGAACCTCATGCAGTTCCATACTGTGGGCACCAAGACCAAGCTGTCTACA CTCACCCTGCTCTGGCCCTGCCCCATGACCTTTGTTGCCAAAGGGCGCCGCAAAGCAGAGGCTGAGAATAAGGCG GCAGCCTTGGCCTGCAAGAACTGAAGAGCCTGGGCCTGGTGGACAGGAACAACGAACCGCTTACACACGGTTAC ${\tt GGAGCCGATGGC} \underline{{\tt TGA}} {\tt CGTATTTCATGGCAGTCAAGTCCAATGGCAGCGTCTTCGTCCGGGACTCCTCTCAGGTGC$ ACCCGCTAGCTGTGCTGCTGACCGACGGGGACGTGCACATCCGTGATGACGGGCCCCGGGCCACCATCTCAC TGAGCGACAGTGACCTGCGGCTGGAGGGTGACTCGCGTACCGTGCGGCTGCTGAAGGAGCTGCGGCGGGCCC TGGGCCGCATGGTGGAGCGGAGCCTGCGCAGCGAGCTGCCTCCCCCAGCGTACAGGAGGAGCACGGGC AGCTGCTTGCGCTACTGGCAGAGCTGCTGCGAGGACCCTGTGGCAGCTTTGATGTGCGCAAGACAGCTGACGACT

MAAARRLMALAAGISPRLQPLGPRAAGRQGRSRGFSSSCAHPDHTKEAAEAESGMAPGGPGEGDGSLVNASRDLL KEFPQPKNLLNSVIGRALGISHAKDKLVYVHTNGPKKKKVTLHIKWPKSVEVEGYGSKKIDAERQAAAAACQLFK GWGLLGPRNELFDAAKYRVLADRFGSPADSWWRPEPTMPPTSWRQLNPESIRPGGPGGLSRSLGREEEEDEEEEL EEGTIDVTDFLSMTQQDSHAPLRDSRGSSFEMTDDDSAIRALTQFPLPKNLLAKVIQIATSSSTAKNLMQFHTVG TKTKLSTLTLLWPCPMTFVAKGRRKAEAENKAAALACKKLKSLGLVDRNNEPLTHGYGADG

 $\tt CGAAAGGCCGGCCTGCGACAGCCTGGGTAAGAGGTGTAGGTCGGCTTGGTTTTCTGCTACCCGGAGCTGGG$ CAAGCGGGTGGGAGAACAGCGAAGACAGCGTGAGCCTGGGCCGTTGCCTCGAGGCTCTCGCCCGGCTTCTCTTGC GCGGCAGCCGCGCCCTGAACCGCGGAGTCGTGTTTGTGTTTGACCCGCGGGCGCCGGTGGCGCCGCGGCCGAGGC $\tt CCGTCGTGAAGGCGCTATTTGGCGCTTCAGCCGCCGGGGGACTGTCGCCTGTCACCAACCTGACCGTCACTATGG$ ${\tt ACCAGCTGCAGGGTCTGGGCAGTGATTATGAGCAACCACTGGAGGTGAAGAACAACAGTAATCTGCAGAGAATGG}$ GCTCCTCCGAGTCAACAGATTCAGGTTTCTGTCTAGATTCTCCTGGGCCATTGGACAGTAAAGAAAACCTTGAAA ATCCTATGAGAAGAATACATTCCCTACCTCAGAAGCTGTTGGGATGTAGTCCAGCTCTGAAGAGGAGCCATTCTG ATTCTCTTGACCATGACATCTTTCAGCTCATCGACCCAGATGAGAACAAGGAAAATGAAGCCTTTGAGTTTAAGA AGCCAGTAAGACCTGTATCTCGTGGCTGCCTGCACTCTCATGGACTCCAGGAGGGTAAAGATCTCTTCACACAGA GGCAGAACTCTGCCCCAGCTCGGATGCTTTCCTCAAATGAAAGAGATAGCAGTGAACCAGGGAATTTCATTCCTC TTTTTACACCCCAGTCACCTGTGACAGCCACTTTGTCTGATGAGGATGATGGCTTCGTGGACCTTCTCGATGGAG ${\tt AGAATCTGAAGAATGAGGAGGAGCCCCCTCGTGCATGGCAAGCCTCTGGACAGCTCCTCTCGTCATGAGAACTA}$ CAAACCTTGACAACCGATGCAAGCTGTTTGACTCCCCTTCCCTGTGTAGCTCCAGCACTCGGTCAGTGTTGAAGA GACCAGAACGATCTCAAGAGGAGTCTCCACCTGGAAGTACAAAGAGGAGGAAGAGCATGTCTGGGGCCAGCCCCA AAGAGTCAACTAATCCAGAGAAGGCCCATGAGACTCTTCATCAGTCTTTATCCCTGGCATCTTCCCCCCAAAGGAA TTGCTGGGAAACATCAGGATTTAAAATACATCTCTCCAGAAATTATGGCATCTGTTTTGAATGGCAAGTTTGCCA TGAACTTGCACATGGAAGAAGAGGTTGAAGACTTCTTATTGAAGAAGCCCATTGTACCTACTGATGGCAAGCGTG GCCTGGGTAATGAATACCCCAAACTCCACTACCCTGAGCTGTATGTCCTGAAGGGGGGGATACAAGGAGTTCTTTA TGAAATGCCAGTCTTACTGTGAGCCCCCTAGCTACCGGCCCATGCACCACGAGGACTTTAAAGAAGACCTGAAGA AGTTCCGCACCAAGAGCCGGACCTGGGCAGGGGAGAAGAGCAAGAGGGAGATGTACAGTCGTCTGAAGAAGCTCT GAGGGCGGCAGGCCAGCCAGCCAGCCCAAGCTTCCCTCCATCCCCCTTTACCCTCTTTGCTGCAGAGAAACT GAACTGTGCCACAATGCAGTTCTGAGCACCGTGTCAAGCTGCTCTGAGCCACAGTGGGATGAACCAGCCGGGGCC CCAAATAGCAAAGA

MKTQRNGHSLGRWSLVLLLLGLVMPLAIIAQVLSYKEAVLRAIDGINQRSSDANLYRLLDLDPRPTMDGDPDTPK PVSFTVKETVCPRTTQQSPEDCDFKKDGLVKRCMGTVTLNQARGSFDISCDKDNKRFALLGDFFRKSKEKIGKEF KRIVQRIKDFLRNLVPRTES

CGTGCGTGCGCGCAGATGTGGGCCCCGCGGGAGCAGCTACTGGGCTGGACTGCGGAAGCTCTGCCTAAGG ${\tt ATTCTGCCTGGCCCTGGGAAGAGCCTAGATATCTGGTTCCAGTGGCAGATGGGGCACTGGCCAGAGGGGTTA}$ GGAGGATTTGGACTCTCCTTGGGAGTCGCTGTGATACGGCCTTCAATTATAGTTGTCTTTCCTTCTTGGATTTCC ACCACTTCCCTGAAACCACGAGCTGGAAGCTGAGACCAGCTGGTCACTGCTGGGCCTAGGAGCCCACACGGA ATTTTCAAATGTTGAACCAGCTTTGCAGAACTATAATAAACCCAAGTGTGATACCCTGTCTCAAGTATTGTGGTG ATCAAATAGGACCAGTGACTTTCGAGGATGTGGCTGTGCTTTTCACTGAGGCAGAGTGGAAGAGACTGAGCCTTG AGCAGAGGAACCTATACAAAGAAGTGATGCTGGAAAATCTCAGGAATCTGGTCTCATTGGAATCAAAGCCAGAAG TCCATACCTGCCCTTCTTGCCCTCTGGCCTTTGGCAGTCAGCAGTTCCTCAGCCAAGATGAGCTACACAATCATC CTATTCCAGGTTTCCATGCAGGAAATCAACTCCACCCAGGAAATCCCTGCCCAGAGGATCAGCCACAGTCACAAC ATCCTTCTGATAAAAATCACAGGGGGGCTGAAGCAGAAGATCAACGAGTGGAAGGAGGCGTCAGACCCTTGTTTT GGAGTACAAATGAAAGGGGGGCTTTAGTGGGTTTCTCTAGCCTGTTCCAGAGACCACCAATAAGCTCTTGGGGAG GCAACAGAATATTAGAGATACAGCTCAGTCCAGCCCAGAATGCAAGCTCTGAGGAAGTAGACAGAATTTCCAAGA GGGCAGAAACCCCAGGGTTTGGAGCAGTCACGTTTGGGGGAGTGTGCACTAGCTTTTAACCAGAAGTCAAACCTGT TCAGACAGAAGGCAGTCACAGCAGAAAAATCTTCAGACAAAAGGCAGTCACAGGTGTGCAGGGAGTGTGGGCGAG GTGGGCGAGGCTTTATAGTTGAGTCAGTCCTCCGCAACCACCTGAGTACACACTCCGGGGAGAAACCTTATGTGT CGTTTATGTGCACAGTGTGGGGGGGGCTTTCGTGAAAAGTCAGAGCTCATTAAGCACCAGAGGTGTCAAGTGA CACTCTCCTGCTTTATTTTTTTCTACATCTCTAGCCTTTGCTGTTTCCTCCTACCCCACCTTTAGATTTTACT CAGAGTTCAGTCTCCAGCCCTACAATCTGAGGGACACCTTTACCAGGTCCCCTTCCTAACCCTCCAGTCCCAAAT CCAAGATTCTTTAACCACACTCTAAAAGTTCTTCAGACTCAGGACTTAAACATAGCCACGCCACCTTGGCCTTCA ATGACAGGGATCTAGCAATGCTGCATCATCAGCCTTCCAATACCAGGTTTAAGGGTATTTTAAACACAGCTCCTC TTAAATCCTCCAATCTCAGTACCCAGTGTTTTAGCCATGCTCGGGTGGCTAAATTACATCCAGGAATGGTGCCAG GGCCTTTAGCCATTTGTCTCTCCTCACACTCCAGGGCCCCATATGGCCCAGGTTCTGACAGTTTGCCTTACTCCCT TGGGCTGGGGCTAGCCCTACCTGATACCCTGTGTCAATGAGTGTACCTTGGAGAGCTATCCACTCAGGCCCCAGT GCCTCTATTTGCTAAGGGACTCTGCCACAGAAAAGAAGGGGGAGAGATGTTCATGTAACCTCAAAATACTTAGGCT $\verb|CCTCTCACTGGAAGTGGTTGATCTCCAGGGAATCCCCAAGGTTAGCCTGCTTAGGGGAAGGGCTAGGGGTACCTG|\\$ GAATGTAGGATCTCCCCCATGCCTGGCCTACCACCCTAATGTGTCTGGAATTGGTGGGTTCTTGGTCTTGCTGAC TTCAAGAATGAAGCCGTGGACCCTCACGGTGAGTGTTACAATTCTTAAA

CTGGACCAAGCTACCAGGGCTACCACCATGCCGCCTCAGCCAGGGATGCCAGCAGCACCCTACCCAATGCAGT CCTACCCGCCAGCCAGCCTCCTTACAACCCGGCCTACATGGATGCCCCGAAGGCGGCCCTCTGAGCATTCCCTG GCCTCTCTGGCTGCCACTTGGTTATGTTGTGTGTGTGCGTGAGTGGTGTGCAGGCGCGGGTTCCTTACGCCCCATG CTCTGATGCTGACAAGGTGGGGAACAATCCTTGCCAGAGTGGGCTGGGACCAGACTTTGTTCTCTCCTCACCTG AAATTATGCTTCCTAAAATCTCAAGCCAAACTCAAAGAATGGGGTGGTGGGGGGCACCCTGTGAGGTGGCCCCTG AGAGGTGGGGGCCTCTCCAGGGCACATCTGGAGTTCTTCTCCAGCTTACCCTAGGGTGACCAAGTAGGGCCTGTC ACACCAGGGTGGCGCAGCTTTCTGTGTGATGCAGATGTGTCCTGGTTTCGGCAGCGTAGCCAGCTGCTTGAG GCCATGGCTCGTCCCCGGAGTTGGGGGTACCCGTTGCAGAGCCAGGGACATGATGCAGGCGAAGCTTGGGATCTG GCCAAGTTGGACTTTGATCCTTTGGGCAGATGTCCCATTGCTCCCTGGAGCCTGTCATGCCTGTTGGGGATCAGG CAGCCTCCTGATGCCAGAACACCTCAGGCAGAGCCCTACTCAGCTGTACCTGTCTGCCTGGAETGTCCCCTGTCC TTGCTGGCCCTGCCCTTCCCACAGGTGAGCAGGGCTCCTGTCCACCAGCACACTCAGTTCTCTTCCCTGCAGTGT TTTCATTTTATTTTAGCCAAACATTTTGCCTGTTTTCTGTTTCAAACATGATAGTTGATATGAGACTGAAACCCC TGGGTTGTGGAGGGAAATTGGCTCAGAGATGGACAACCTGGCAACTGTGAGTCCCTGCTTCCCGACACCAGCCTC ATGGAATATGCAACAACTCCTGTACCCCAGTCCACGGTGTTCTGGCAGCAGGGACACCTGGGCCAATGGGCCATC TGGACCAAAGGTGGGGTGTGGGGCCCTGGATGGCAGCTCTGGCCCAGACATGAATACCTCGTGTTCCTCCCT $\verb|CTATTACTGTTTCACCAGAGCTGTCTTAGCTCAAATCTGTTGTGTTTCTGAGTCTAGGGTCTGTACACTTGTTTA|\\$ TAATAAATGCAATCGTTTGG

1214/6881 FIGURE 1132A

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AGCGAACCATCGGGGCCGGCAGCCATGTTGGAGCGGCGGGAGGCGGCAGCAGCGTCGGGGATGCTGTGGTGG GGGCGGAAAAAGCCAGGGCCGCACGCCGGAGGGGCTCCGGCCGCGGAGTAGATGGTGCCCAGAGGGCGGGGGG CGTGGCGGGGCCTCGGGGAACGGTCGACCCCCATACTCCTGCTCCTTCTCTCTTTTTTTCCCCCTCAGCCAGG AGGAGCTGGGGGGGGGGGCACCAGGGCTGGGACCCAGGCTTAGCTGCCACTACGGGGCCCAAGGGCCCATATCG GTGGCGGAGCCTTAGCTCTTTGTCCGGAGTCTTCCGGGGTCCGGGAGGATGGGGGGCCTGGCCTGGGGGTCAGGG AGCCTATCTTCGTGGGGCTCCGAGGGAGAAGGCAAAGCGCCCGGAATAGTCGAGGGCCCCCTGAGCAGCCGAATG AGGAGCTGGGGATTGAACACGGCGTCCAGCCATTGGGCAGCCGCGAACGAGACAGGACAGGACAGGGACCAGGGTCTG TGTTATACTGGCGCCCAGAGGTCTCCTCTTGCGGGCGGACAGGACCTTTGCAAAGAGGTAGTCTGTCACCAGGGG CCAAGCCGGTGTCCTCCCAGCGGAACGCTGGGACAGGCTCCCGCAAAAGAGTGGGCACCGCGCGCTGCTGTGGGG AATTATGGGCAACAGGGAGCAAGGGTCAGGGCGAGAGAGCCCCCGGCCACATCCGGAGCAGAAAGGACAGCCCCCCGGC CATCAGGTTCAGCACCCCGCGAGTCTCGGACAGCTCCCGAGCCGCGCCCAAGCGCATGCGCTCCCGGGGTCTCT TCCGCTGCCGCTTCCTCCCGCAGCGCCCCGGGCCGCCTCCCCGGGACTCCCGGCCCGTCCTGAAGCCAGGAAAG TAACCTCGGCGAACCGGGCACGCTTTCGTCGCGCCGCAAACCGCCACCCGCAGTTTCCGCAGTACAACTACCAGA CGCTGGTGCCGGAGAATGAGGCAGCAGGCACCGCGGTGCTACGCGTGGTTGCTCAGGACCCCGGACGCCGGAGG GCGGCCTTATCCGTACGGCGGCAGCTCTGGACCGCGAGAGCATGGAGCGTCACTACCTGCGTGTGACCGCGCAGG ACCACGGGTCGCCGCGCCTCTCGGCCACCACGATGGTGGCCGTGACAGTAGCCGACCGCAACGACCACTCGCCGG TTTTTGAGCAAGCGCAGTACCGGGAGACCCTTCGCGAGAATGTGGAGGAGGGCTACCCTATCCTGCAGCTGCGTG CTGCCGCCGCCTTCGAGATTGATCCACGCTCCGGCCTCATCAGCACCAGCGGCCGAGTGGACCGCGAGCACATGG AAAGCTATGAGCTGGTGGTAGCCAGCGACCAGGGCCAGGAACCCGGGCCGCGCTCGGCCACTGTGCGCGTAC ACATAACTGTGCTAGACGAGAACGACAATGCTCCTCAGTTCAGCGAGAAGCGCTACGTGGCGCAGGTGCGCGAGG ATGTGCGCCCCACACAGTCGTGCTGCGCGTCACGGCCACTGACCGGGACAAGGACGCCAACGGATTGGTGCACT ACAACATCATCAGTGGCAATAGCCGTGGACACTTTGCCATCGACAGCCTCACTGGCGAGATCCAGGTGGTGGCAC ACAACACGGGCCTGGCCAGCATCCAGGTGGTGGACATCAATGACCACATTCCTATTTTTTGTCAGCACGCCCTTCC AAGTTTCTGTCTTGGAAAATGCTCCCTTGGGTCACTCAGTCATCCACATTCAGGCAGTCGATGCAGACCATGGGG AGAATGCCAGATTGGAGTACTCCCTAACTGGTGTGGCACCTGATACTCCTTTTGTGATAAACAGCGCCACTGGCT GGGTCTCTGTGAGTGGTCCCCTGGACCGTGAGTCTGTGGAGCATTACTTCTTTGGTGTGGAGGCTCGAGACCATG GCTCACCCCACTCTCTGCCTCAGCCAGTGTCACCGTGACTGTGCTGGACGTTAATGACAATCGGCCTGAGTTCA CAATGAAGGAGTACCACCTACGACTGAATGAGGATGCAGCTGTGGGCACCAGTGTGGTCAGCGTGACCGCAGTAG ACCGTGATGCCAACAGTGCCATCAGCTACCAGATCACAGGCGGCAACACCCGGAATCGCTTTGCCATCAGCACCC AGGGGGGTGTGGGTGACTCTGGCTCTGCCACTGGACTACAAGCAGGAACGCTACTTCAAGCTGGTACTAA $\verb|CTGCATCTGACCGTGCCCTTCATGATCACTGCTATGTGCACATCAACATCACAGATGCCAACACTCATCGGCCGG|\\$ TCTTTCAAAGTGCCCACTACTCAGTGAGTGTGAATGAAGATCGGCCAATGGGTAGCACCATAGTGGTCATCAGTG CCTCTGATGATGACGTGGGTGAGAATGCTCGTATCACCTATCTCCTGGAGGACAACCTGCCCCAGTTCCGCATTG ATGCAGACTCAGGAGCCATTACATTACAGGCCCCATTAGACTATGAGGACCAGGTGACCTACACCCTGGCTATCA CAGCTCGGGACAATGGCATCCCACAGAAGGCAGACACTACTTATGTGGAGGTGATGGTCAATGACGTGAATGACA ATGCTCCACAATTTGTGGCCTCCCACTATACAGGGCTGGTCTCTGAGGATGCCCCACCTTTCACCAGTGTCCTGC AGATCTCAGCCACTGACCGGGATGCTCATGCCAATGGCCGGGTCCAGTACACTTTCCAGAATGGTGAAGATGGGG ATGGAGATTTTACCATTGAGCCCACCTCTGGAATTGTCCGTACAGTAAGGCGGCTAGACCGGGAGGCAGTATCAG TGCAGGATGTGAACGACAATGCACCTGTCTTCCCAGCTGAGGAGTTTGAGGTGCGGGTGAAAGAGAATAGCATTG TGGGCTCAGTGGTGGCCCAGATCACTGCAGTGGACCCTGACGAAGGCCCCAATGCCCATATAATGTACCAGATCG

FIGURE 1132B

TGGAGGGGAACATCCCTGAGCTGTTCCAAATGGACATCTTCTCTGGAGAACTGACGGCACTCATTGACCTAGACT ATGAGGCTCGCCAAGAATATGTGATTGTGGTGCAGGCCACATCTGCTCCTTTGGTCAGCCGGGCCACTGTGCACG TCCGCCTGGTTGACCAGAATGACAACAGCCCTGTGCTCAACAACTTCCAGATCCTCTTCAACAACTATGTATCCA ACCGTTCAGACACCTTCCCGTCGGGCATTATTGGGCGCATCCCAGCTTATGACCCCGATGTCTCCGACCACCTCT TCTACTCCTTTGAGCGTGGCAATGAGCTGCAGCTGCTGGTAGTCAACCAGACCAGTGGGGAGCTGCGACTCAGCC GAAAGCTAGACAATAACCGCCCACTGGTGGCCTCCATGTTGGTGACTGTCACAGATGGCCTGCACAGCGTGACGG CGCAGTGTGCTGCGCGTGGTCATCATCACGGAGGAGTTGCTGGCCAACAGCCTGACCGTGCGCCTTGAGAACA TGTGGCAGGAGCGCTTCCTGTCACCGCTGCTGGGCCGCTTCCTCGAGGGCGTGGCTGCGTGCTCGCTACGCCCG CTGAGGACGTCTTCATCTTCAACATCCAGAACGACACAGACGTAGGGGGCACCGTGCTCAATGTGAGTTTCTCGG ${\tt CGCTAGCTCCACGTGGGGCCGGGGGCGCTGCAGGGCCCTGGTTCAGCTCCGAGGAGCTGCAGGAGCAGTTGT}$ ACGTGCGCCGGGCGGCTGGCGGCTCGCTCCCTGCTCGACGTACTGCCCTTCGACGACAACGTGTGCCTGCGAG AGCCCTGTGAGAACTACATGAAATGCGTGTCCGTGCTCCGCTTTGACTCGTCCGCGCCCTTCCTGGCCTCGGCCT GCGTCTGCCGCAACGGGGGCACCTGCACCGACGCGCCCAACGGCGGCTTTCGCTGCCAGTGCCCGGCAGGCGGCG CCTTCGAGGGCCCGCGCTGCGAGGTGGCTGCGCGCCCCAGTTCGTCGTCATGTTTCGCGGCCTGC GGCAGCGATTCCACCTTACGCTGTCCCTCTCGTTCGCGACAGTGCAGCAGAGCGGGCTGCTCTTCTACAACGGGC AATCCAACACCGTGGTCAGCCCCACAGTTCCAGGGGGCTTGAGTGACGGGCAATGGCATACAGTGCATCTGAGAT ACTACAACAAGCCCCGGACAGATGCCCTAGGGGGTGCACAGGGCCCCTCCAAGGACAAGGTGGCTGTGCTAAGCG TGGATGATTGTGATGTGGCCGTGGCTCTGCAGTTTGGTGCTGAGATTGGCAACTACTCATGCGCGGCTGCTGGTG TGCAAACAAGCTCCAAGAAGTCCCTGGACCTGACGGGCCCTCTTCTTCTGGGAGGTGTCCCCAACCTCCCCGAGA ACTTCCCCGTATCCCATAAGGACTTCATCGGCTGTATGCGGGACCTGCACATTGATGGCCGCCGAGTGGACATGG AGAACAGTGGCTTCTGCTCGGAGCGCTGGGGCAGCTTCAGCTGCGACTGCCCTGTGGGCTTCGGCGGCAAAGACT ${\tt GTCAGCTTACTATGGCCCATCCCCACCATTTCCGTGGCAACGGCACACTGAGCTGGAACTTTGGAAGTGACATGG}$ CTGTGTCTGTGCCATGGTACCTGGGGCTGGCATTTCGGACACGGGCAACGCAGGGGGTCCTGATGCAAGTGCAGG GTGCTTCCCATCTCCTTCTGGACCAGGTGACTGTCAGTGATGGCCGGTGGCACGATCTGCGGCTGGAGTTGCAGG AGGAACCAGGTGGCCGGCGGGCCACCATGTCCTTATGGTCTCACTGGACTTTAGCCTCTTCCAGGACACCATGG CGGTGGGGAGTGAGCTGCAGGGCCTGAAGGTAAAGCAGCTCCACGTGGGAGGCCTGCCCCCGGCAGTGCAGAGG AGGCTCCTCAGGGTCTGGCTGGCTCCAGGGGGTGTGGCTCGGCTCCACACCCTCTGGCTCCCCGGCCCTGC TACCCCCCAGCCACCGAGTGAATGCGGAGCCTGGCTGTTGTTGTGACCAACGCCTGTGCCTCTGGGCCCTGCCCAC TGGATGCCTGCCTGAACCCCTGTCAGAACCAGGGATCATGCCGGCACCTGCCAGGAGCCCCCCATGGCTATA CCTGTGACTGTGGGGGGCTATTTCGGGCACCACTGTGAGCACAGGATGGACCAGCAGTGCCCACGGGGCTGGT GGGGGAGCCCAACCTGTGGCCCCTGCAACTGTGATGTTCACAAAGGTTTTGATCCCAACTGCAACAAGACAAAATG GGCAGTGTCACTGCAAGGAGTTCCACTACCGACCGCGGGGCAGTGACTCTTGCCTCCCATGTGACTGCTACCCTG TGGGCTCCACCTCGCGCTCATGTGCACCCCACAGCGGGCAGTGCCCCTGTCGCCCAGGAGCCCTTGGCCGCCAGT CCCTGAGATCTGGTGTGTGGGCCCCAGACAAAGTTTGGCGTCCTGGCCACAGTGCCCTGTCCCCGGGGGGCCC TGGGTGCTGCTGTGCGGCTGTGATGAGGCCCAGGGTTGGCTGGAGCCCGACCTCTTCAACTGTACCTCCCCTG CCTTTCGAGAGCTCAGTCTGCTGGATGGCCTAGAGCTGAACAAGACGGCACTGGATACCATGGAGGCCAAGA AGCTGGCTCAGCGGCTACGGGAGGTGACTGGCCACACTGACCACTATTTTAGCCAAGATGTTCGAGTCACTGCCC GCCTGCTGGCCCACCTGCTGGCCTTCGAGAGCCATCAGCAGGGCTTCGGGCTGACAGCCACACAGGATGCCCACT TCAATGAGAATCTGCTGTGGGCCGGCTCTGCACTGCTTGCCCCAGAGACAGGGGACTTGTGGGCGGCGCTGGGGC AGCGGGCCCCTGGGGGCTCCCCAGGCAGCGCGGGACTGGTGAGGCACCTGGAGGAGTATGCAGCCACACTCGCAA

FIGURE 1132C

GGAATATGGAACTCACATACCTGAATCCCATGGGGCTGGTGACGCCTAATATCATGCTCAGCATTGACCGCATGG AGCACCCCAGTTCTCCCCGGGGGGCCCGTCGCTACCCTCGCTACCATAGCAACCTCTTTCGAGGCCAGGATGCCT GGGATCCTCACACCCATGTGCTGCCTTCCCAGTCCCCACGGCCATCCCCATCTGAAGTTCTGCCCACAAGCA GCAGCATAGAAAACTCCACCACCTCAAGTGTGGTCCCCCCACCAGCCCCGCCAGAGCCAGAGCCTGGGATCTCCA TTATCATTCTCCTCGTTTACCGCACCTTAGGGGGACTGCTCCCTGCCCAGTTCCAGGCAGAACGCCGAGGTGCCA GGCTTCCTCAGAACCCCGTCATGAACTCCCCGGTGGTCAGCGTGGCTGTGTTCCACGGACGCAACTTCCTAAGGG AGTGGGACCCACCTGGCCTGGCGGAGCAGCATGGTGTGTGGACAGCACGGGACTGCGAGCTGGTGCACAGGAATG GGTCCCACGCACGGTGTCGCTGCAGCCGGACAGGGACCTTTGGGGTCCTCATGGATGCCTCTCCCCGTGAGAGGC TGGAGGGCGACCTGGAGCTGCTGGCTGTTCACCCACGTGGTCGTGGCTGTGTCTGTGGCTGCGCTGGTGCTGA CTGCAGCCATCCTGCTGAGCCTGCGCAGCCTCAAGTCCAATGTGCGTGGGATCCATGCCAATGTGGCAGCCGCCC TGGGGGTGGCAGAGCTCCTCTTCCTGCTGGGGATTCACAGGACCCACAATCAGCTGGTGTGCACTGCAGTCGCCA TCCTCCTGCACTACTTCTCCTCAGCACCTTCGCGTGGCTCTTCGTGCAGGGGCTGCACCTCTACCGCATGCAGG TTGAGCCACGCAACGTGGACCGCGGCGCCATGCGCTTCTACCATGCCCTGGGCTGGGGCGTCCCTGCTGTGCTGC TGGGCCTTGCTGTGGGCCTGGACCCTGAGGGCTATGGGAACCCTGACTTCTGCTGGATCTCAGTCCACGAGCCCC TCATCTGGAGCTTTGCTGGCCCTGTTGTCCTGGTCATAGTGATGAACGGGACCATGTTTCTCCTCGCTGCCCGCA TGCTGGTCAGTGCCTCCTGGCTCTTTGGGCTCCTGGCAGTCAACCACAGCATCCTAGCCTTCCACTACCTCCATG CTGGACTCTGCGGCCTCCAGGGCCTGCGGGTGCTGCTGCTCTTCTGTGTCCTAAATGCAGATGCTCGGGCTGCCT GGATGCCAGCCTGTCTGGGCAGGAAGGCAGCGCCTGAGGAGGCAAGGCCAGCACCTGGGCTGGGACCTGGGGCCT ACAACAACACGGCTCTCTTTGAGGAGAGTGGCCTCATCCGCATCACTCTGGGCGCCTCCACCGTCTCTGTGA TTCGACATGGCTCAGCCGCTGACCACACTGACCACAGCCTCCAGGCTCATGCTGGCCCCACTGACCTGGACGTGG CCATGTTCCATCGAGATGCTGGCGCAGACTCCGACTCTGACAGTGACCTGTCCTTGGAGGAGGAGAGGAGTCTCT CCATTCCATCTTCAGAAAGCGAGGACAATGGCCGGACGCGGGGGGGCGCTTCCAACGGCCACTCTGCCGAGCAGCCC AGAGTGAGAGGCTCCTCACCCCACCCCAAAGATGTGGATGGCAATGACCTCCTGTCCTACTGGCCAGCCCTGGGGG AGTGCGAGGCAGCCCCCTGTGCTCTGCAGACTTGGGGCTCTGAAAGGCGCCTGGGGCTGGACACCAGCAAGGATG CAGCTAACAACCAGCCAGACCCGGCCCTGACCAGTGGGGATGAGACTTCTCTGGGCCGGGCCCAGCGCCAGA GGAAAGGCATCCTGAAGAACCGGTTGCAATACCCACTGGTGCCACAGACCCGAGGTGCCCCTGAGCTGTCCTGGT GCCGTGCAGCCACCTTGGGCCACCGTGCAGTGCCAGCTGCCTCTTACGGTCGCATCTATGCTGGCGGGGGCACGG GCAGCCTTTCACAGCCAGCCAGCCGCTACTCTTCTAGAGAACAGCTGGACCTGCTCCTCCGGCGGCAACTGAGCC GTGAGCGACTAGAGGAAGCCCCTGCCCCTGTTCTACGTCCCCTGAGCCGGCCAGGGTCCCAGGAATGCATGGATG $\tt CTGCACCAGGCCGACTGGAGCCCAAAGATCGGGGCAGCACCCTGCCACGGAGGCAGCCACCTCGGGACTACCCTG$ GCGCCATGGCTGGCCGCTTCGGGTCACGGGATGCGCTCGACTTAGGGGCACCTCGAGAGTGGTTGAGCACGCTGC CTCCGCCCGCCGCACCCGGGACCTTGACCCACAGCCCCCACCTCTGCCCCTGTCTCCCCAGCGGCAACTCTCAA GGGACCCCTCTTGCCATCCCGGCCGCTGGACTCTCTGTCTAGGAGCTCGAACTCTCGGGAGCAGCTGGACCAGG TGCCTAGCCGGCACCCCTCACGAGAAGCCCTTGGGCCACTCCCGCAGCTGCTCAGAGCTAGGGAGGACTCGGTCA GTGGCCCCAGCCATGGCCCCTCCACAGAACAGTTGGACATTCTTTCCTCCATCCTTGCCTCTTTCAACTCCTCGG CCCTCTCCTCTGTGCAATCTTCAAGCACACCCTTGGGCCCTCACACCACTGCCACACCTTCTGCCACAGCCTCTG TGCTTGGGCCCTCCACGCCACGTTCTGCCACGTCTCACAGCATCTCGGAGCTGTCGCCAGACTCAGAAGTTCCCA ${\tt GAAGTGAGGGTCACTCC} \underline{{\tt TGA}}{\tt GGGGGTGACGGCGTGGACGGGGACAGCTGAGGGCGACAGAGGATCTAGGCTAACCCCC}$ TGGTGTGGCAGGGCTGAGGCTCCATGTGCATCTGTGAGCATGCGTGTGACAGGTGCAGAGACGGGGGACTGGAGG GAGACTTTTATACGTTTTGTACCTTTGTAACCAGAGAGATGCTTATGTTATTTTTCAGCTTTTCTGTCTCCTGGG GGGTTTGAGGCTGGGCTGGGAGGGGAGGAGATAGAGGGAGAGATGCAGTTTGACCCCATTTGGGTCCTGAGCA CACCCCAAGTTGATCTGAGTATCGTCAGGGGCCCAAAGTACAGAATTGTTCTTTGCTTTTTATTGAATGCTCCA AAGGCCAAACTTCTGGGGCTGGGGGTTGGTCTTGGAAACAGGGGTCCTCTGACTTCCTCATGGGGGCTTGCTCAT

1217/6881 FIGURE 1132D

ACCGCCCCTCCTGGTGGATGTGTGTTTATTATGTGGAGTCCCTGCCACTTACTGCCTTATGACCTAGGACTGA TGCTGTGGGGTGCTGGTGGAGCAGCTGATGTCGTGTTTACAGAGCAAGGCTTCCCTGTCTCCCACGGGGAGGGGC TGTCTGTGGTGCCATTTGATTCCCTGACACTGCCCCCTGCTTGAATTGATTCCGAAGGGTAGGGTGGGAAGGTGA GCAAAGGGAGCAGAAACAAGGGAATTCAAGACCCAGAATGTAGGTGCCACTGCCTCCTATGTTTACAGGATCCTC CGTGGCCCTAGGCACCTGGGCTGCAGGAAGTGACTCCGTTCCACTCCTTTATTCCCTTAAAAAAGGGAAAAAT GACTGTTACGACCCTGTTCACAAAACTCTTACTTTTGCTATTTTGTCTGCTGTCCAGAACTGAAGACTTTAAAAT TTTGTTACTGTTTACAAGTCCAGATTCAAAAAATGTTTTTACTTTGTTTACAACTCAAAACTTTGAGTTTTACAC TTTGTTTACAGTAGATAATTTTTTTCCTTTGTTTCCAAGTGAAAGGTAGGGAAAGTGGGAGAGGGACTTGGAGG ACCCACCTGTGAGGACCCTGACCTGGCCATCTTGAGGGGTTTTCTAACCCCCAGGTCTCCCAGGCCGAAGGTCAG CGCGCTCTGTTTTGGGAATAAACTTCTATAGAAAACAAAA

 ${\tt MMARRPPWRGLGERSTPILLLLLSLFPLSQEELGGGGHQGWDPGLAATTGPRAHIGGGALALCPESSGVREDGG}$ PGLGVREPIFVGLRGRRQSARNSRGPPEQPNEELGIEHGVQPLGSRERETGQGPGSVLYWRPEVSSCGRTGPLQR GSLSPGALSSGVPGSGNSSPLPSDFLIRHHGPKPVSSQRNAGTGSRKRVGTARCCGELWATGSKGQGERATTSGA RPEARKVTSANRARFRRAANRHPQFPQYNYQTLVPENEAAGTAVLRVVAQDPDAGEAGRLVYSLAALMNSRSLEL FSIDPQSGLIRTAAALDRESMERHYLRVTAQDHGSPRLSATTMVAVTVADRNDHSPVFEQAQYRETLRENVEEGY PILQLRATDGDAPPNANLRYRFVGPPAARAAAAAFEIDPRSGLISTSGRVDREHMESYELVVEASDQGQEPGPR SATVRVHITVLDENDNAPQFSEKRYVAQVREDVRPHTVVLRVTATDRDKDANGLVHYNIISGNSRGHFAIDSLTG EIQVVAPLDFEAEREYALRIRAQDAGRPPLSNNTGLASIQVVDINDHIPIFVSTPFQVSVLENAPLGHSVIHIQA VDADHGENARLEYSLTGVAPDTPFVINSATGWVSVSGPLDRESVEHYFFGVEARDHGSPPLSASASVTVTVLDVN DNRPEFTMKEYHLRLNEDAAVGTSVVSVTAVDRDANSAISYQITGGNTRNRFAISTQGGVGLVTLALPLDYKQER YFKLVLTASDRALHDHCYVHINITDANTHRPVFQSAHYSVSVNEDRPMGSTIVVISASDDDVGENARITYLLEDN LPQFRIDADSGAITLQAPLDYEDQVTYTLAITARDNGIPQKADTTYVEVMVNDVNDNAPQFVASHYTGLVSEDAP ${\tt PFTSVLQISATDRDAHANGRVQYTFQNGEDGDGDFTIEPTSGIVRTVRRLDREAVSVYELTAYAVDRGVPPLRTP} \\$ VSIQVMVQDVNDNAPVFPAEEFEVRVKENSIVGSVVAQITAVDPDEGPNAHIMYQIVEGNIPELFQMDIFSGELT ${\tt ALIDLDYEARQEYVIVVQATSAPLVSRATVHVRLVDQNDNSPVLNNFQILFNNYVSNRSDTFPSGIIGRIPAYDP}$ DVSDHLFYSFERGNELQLLVVNQTSGELRLSRKLDNNRPLVASMLVTVTDGLHSVTAQCVLRVVIITEELLANSL TVRLENMWQERFLSPLLGRFLEGVAAVLATPAEDVFIFNIQNDTDVGGTVLNVSFSALAPRGAGAAGPWFSSE ELQEQLYVRRAALAARSLLDVLPFDDNVCLREPCENYMKCVSVLRFDSSAPFLASASTLFRPIQPIAGLRCRCPP GFTGDFCETELDLCYSNPCRNGGACARREGGYTCVCRPRFTGEDCELDTEAGRCVPGVCRNGGTCTDAPNGGFRC QCPAGGAFEGPRCEVAARSFPPSSFVMFRGLRQRFHLTLSLSFATVQQSGLLFYNGRLNEKHDFLALELVAGQVR LTYSTGESNTVVSPTVPGGLSDGQWHTVHLRYYNKPRTDALGGAQGPSKDKVAVLSVDDCDVAVALQFGAEIGNY ${\tt SCAAAGVQTSSKKSLDLTGPLLLGGVPNLPENFPVSHKDFIGCMRDLHIDGRRVDMAAFVANNGTMAGCQAKLHF}$ CDSGPCKNSGFCSERWGSFSCDCPVGFGGKDCQLTMAHPHHFRGNGTLSWNFGSDMAVSVPWYLGLAFRTRATQG VLMQVQAGPHSTLLCQLDRGLLSVTVTRGSGRASHLLLDQVTVSDGRWHDLRLELQEEPGGRRGHHVLMVSLDFS LFQDTMAVGSELQGLKVKQLHVGGLPPGSAEEAPQGLVGCIQGVWLGSTPSGSPALLPPSHRVNAEPGCVVTNAC ASGPCPPHADCRDLWQTFSCTCQPGYYGPGCVDACLLNPCQNQGSCRHLPGAPHGYTCDCVGGYFGHHCEHRMDQ QCPRGWWGSPTCGPCNCDVHKGFDPNCNKTNGQCHCKEFHYRPRGSDSCLPCDCYPVGSTSRSCAPHSGQCPCRP GALGRQCNSCDSPFAEVTASGCRVLYDACPKSLRSGVWWPQTKFGVLATVPCPRGALGAAVRLCDEAQGWLEPDL ${\tt FNCTSPAFRELSLLLDGLELNKTALDTMEAKKLAQRLREVTGHTDHYFSQDVRVTARLLAHLLAFESHQQGFGLT}$ ${\tt ATQDAHFNENLLWAGSALLAPETGDLWAALGQRAPGGSPGSAGLVRHLEEYAATLARNMELTYLNPMGLVTPNIM}$ ${\tt LSIDRMEHPSSPRGARRYPRYHSNLFRGQDAWDPHTHVLLPSQSPRPSPSEVLPTSSSIENSTTSSVVPPPAPPE}$ PEPGISIIILLVYRTLGGLLPAQFQAERRGARLPQNPVMNSPVVSVAVFHGRNFLRGILESPISLEFRLLQTANR SKAICVQWDPPGLAEQHGVWTARDCELVHRNGSHARCRCSRTGTFGVLMDASPRERLEGDLELLAVFTHVVVAVS VAALVLTAAILLSLRSLKSNVRGIHANVAAALGVAELLFLLGIHRTHNQLVCTAVAILLHYFFLSTFAWLFVQGL ${\tt HLYRMQVEPRNVDRGAMRFYHALGWGVPAVLLGLAVGLDPEGYGNPDFCWISVHEPLIWSFAGPVVLVIVMNGTM}$ FLLAARTSCSTGQREAKKTSALTLRSSFLLLLLVSASWLFGLLAVNHSILAFHYLHAGLCGLQGLAVLLLFCVLN $\mathtt{ADARAAWMPACLGRKAAPEEARPAPGLGPGAYNNTALFEESGLIRITLGASTVSSVSSARSGRTQDQDSQRGRSY$ LRDNVLVRHGSAADHTDHSLQAHAGPTDLDVAMFHRDAGADSDSDLSLEEERSLSIPSSESEDNGRTRGRFQR PLCRAAQSERLLTHPKDVDGNDLLSYWPALGECEAAPCALQTWGSERRLGLDTSKDAANNNQPDPALTSGDETSL GRAQRQRKGILKNRLQYPLVPQTRGAPELSWCRAATLGHRAVPAASYGRIYAGGGTGSLSQPASRYSSREQLDLL $\tt LRRQLSRERLEEAPAPVLRPLSRPGSQECMDAAPGRLEPKDRGSTLPRRQPPRDYPGAMAGRFGSRDALDLGAPRDAMAGRFGSRDAMAGRFGS$ EWLSTLPPPRRTRDLDPQPPPLPLSPQRQLSRDPLLPSRPLDSLSRSSNSREQLDQVPSRHPSREALGPLPQLLR AREDSVSGPSHGPSTEQLDILSSILASFNSSALSSVQSSSTPLGPHTTATPSATASVLGPSTPRSATSHSISELS **PDSEVPRSEGHS**

TACTGACTTTCAGCACCAACTTGTGGTCCCAGGTAAGTTTCCACGCTGGTACTTTAGCCCTGGGCTCGAACCTGC GGACACGCTGTGGCTGCAACTCCCCGCCCGCCAGACCTCAGTACGCAGCGCGGCTGGTGAGAAACATAATGCACT ACTGATGTGCGCAGGGACTGGCGGCAGCGCGGTCAGAGCCAGTCAGCCAAAGCCAGGCCAGCACAATAGACTGTC CCGGTTCCCGCCAGGAGGCGGCCGAGCACCAACTGTACGGTACTGCGCCTGCGCCGCGACCGCCAACGCGCCCAG ${\tt TCTACGCTTGCGCGGCGCAACAGGGCCGACTGCAGCTGGAAG} \underline{{\tt ATG}} {\tt GCGGCGTCCGTGGTCTGTCGGGCCGCTACC}$ GCCGGGGCACAAGTGCTATTGCGCGCCCGCCGCCCGCCGGCCCTGCTGCGGACGCCAGCCTTGCGGAGTACGGCA ACCTTCGCTCAGGCGCTCCAGTTCGTGCCGGAGACGCAGGTTAGCCTGCTGGACAACGGCCTGCGTGTGGCCTCC GAGCAGTCCTCTCAGCCCACTTGCACGGTGGGAGTGTGGATTGATGTTGGCAGCCGTTTTGAGACTGAGAAGAAT AATGGGGCAGGCTACTTTTTGGAGCATCTGGCTTTCAAGGGAACAAAGAATCGGCCTGGCAGTGCCCTGGAGAAG GAGGTGGAGAGCATGGGGGCCCATCTTAATGCCTACAGCACCCGGGAGCACACAGCTTACTACATCAAGGCGCTG TCCAAGGATCTGCCGAAAGCTGTGGAGCTCCTGGGTGACATTGTGCAGAACTGTAGTCTGGAAGACTCACAGATT GAGAAGGAACGTGATGTGATCCTGCGGGAGATGCAGGAGAATGATGCATCTATGCGAGATGTGGTCTTTAACTAC CTGCATGCCACAGCATTCCAGGGCACACCTCTAGCCCAGGCTGTGGAGGGGCCCCAGTGAGAATGTCAGGAAGCTG TCTCGTGCAGACTTGACCGAGTACCTCAGCACACATTACAAGGCCCCTCGAATGGTGCTGGCAGCAGCTGGAGGA GTGGAGCACCAGCAACTGTTAGACCTCGCCCAGAAGCACCTCGGTGGCATCCCATGGACATATGCAGAGGACGCT GTGCCCACTCTTACTCCATGCCGCTTCACTGGCAGTGAGATCCGCCACCGTGATGATGCTCTACCTTTTGCCCAC GTGGCCATTGCAGTAGAGGGTCCTGGCTGGGCCAGCCCGGACAGTGTGGCCTTGCAAGTGGCCAATGCCATCATC GGCCACTATGACTGCACTTATGGTGGTGGCGTGCACCTGTCCAGCCCACTGGCTTCAGGTGCTGTGGCCAACAAG CTATGCCAGAGTTTCCAGACCTTCAGCATCTGCTATGCAGAGACGGGCTTGCTGGGTGCACACTTTGTCTGTGAC CGAATGAAAATCGATGACATGATGTTCGTCCTGCAAGGGCAGTGGATGCGCCTGTGTACCAGTGCCACGGAGAGT GACATCGGACGCAGCCTCCTGACCTATGGCCGCCGCATCCCCCTGGCTGAATGGGAAAGCCGGATTGCGGAGGTG GATGCCAGTGTGGTACGTGAGATCTGCTCCAAGTACATCTATGACCAGTGCCCAGCAGTGGCTGGATATGGCCCC ${\tt ATTGAGCAGCTCCCAGACTACAACCGGATCCGTAGCGGCATGTTCTGGCTGCGCTTC} \underline{{\tt TAG}}{\tt GCGGGAAGCCTATGT}$ CCACAGGTGACCACCAATAAAATCCTCTGCTGAGA

MAASVVCRAATAGAQVLLRARRSPALLRTPALRSTATFAQALQFVPETQVSLLDNGLRVASEQSSQPTCTVGVWI
DVGSRFETEKNNGAGYFLEHLAFKGTKNRPGSALEKEVESMGAHLNAYSTREHTAYYIKALSKDLPKAVELLGDI
VQNCSLEDSQIEKERDVILREMQENDASMRDVVFNYLHATAFQGTPLAQAVEGPSENVRKLSRADLTEYLSTHYK
APRMVLAAAGGVEHQQLLDLAQKHLGGIPWTYAEDAVPTLTPCRFTGSEIRHRDDALPFAHVAIAVEGPGWASPD
SVALQVANAIIGHYDCTYGGGVHLSSPLASGAVANKLCQSFQTFSICYAETGLLGAHFVCDRMKIDDMMFVLQGQ
WMRLCTSATESEVARGKNILRNALVSHLDGTTPVCEDIGRSLLTYGRRIPLAEWESRIAEVDASVVREICSKYIY
DQCPAVAGYGPIEQLPDYNRIRSGMFWLRF

TCCGACTCATCCCGGCCCCGGGATGGCGTCCCCACGGGAATTGACACAGAACCCCCTGAAGAAGATCTGGATGCC ATACAGCAATGGGCGGCCCGCTCTGCACGCTTGCCAGCGCGGTGTGTGCATGACCAACTGCCCAACTCTCATTGT CATGGTGGGCCTGCCCGCCAGGGGCAAGACCTACATCTCCAAGAAGCTGACTCGATACCTGAACTGGATTGGTGT GCCCACTCGGGAGTTCAATGTTGGCCAGTATCGCCGGGACGTGGTCAAGACCTACAAATCTTTTGAATTTTTTCT CCCCGACAATGAAGAGGGCCTGAAAATCAGGAAGCAGTGTGCCCTGGCAGCCCTCCGTGACGTCCGGCGGTTCCT TAGTGAGGAGGGGGACATGTGGGGGTTTTTGATGCCACAAACACCCCGAGAACGGAGAGCGACCATCTTTAA TTTTGGAGAACAGAATGGCTACAAGACCTTTTTTGTCGAGTCCATCTGTGTGGATCCTGAGGTCATAGCTGCCAA CATCGTGCAAGTGAAACTGGGCAGCCCTGACTATGTCAACCGCGACAGTGATGAGGCTACGGAGGACTTCATGAG GCGCATTGAGTGCTATGAGAACTCCTACGAGTCGCTAGATGAGGACCTGGATAGGGACCTGTCCTATATCAAGAT CATGGATGTGGGCCAGAGCTACGTGGTGAACCGTGTGGCTGACCACATCCAGAGCCGCATCGTATATTACCTCAT TGGCGGGGACCCAGGACTGTCCCCTCGGGGCAGGGAGTTTGCCAAGAGTCTAGCCCAGTTCATCAGTGACCAAAA TATCAAGGATCTGAAGGTCTGGACAAGCCAGATGAAGAGGACAATCCAGACGGCTGAGGCACTGGGTGTGCCCTA TGAACAGTGGAAGGTCCTCAACGAGATCGATGCGGGCGTCTGTGAGGAAATGACCTACGAGGAAATTCAGGATAA TTATCCACTGGAGTTCGCCCTGCGGGACCAGGACAAGTACCGGTACCCTAAAGGGGGAGTCCTACGAGGA ${\tt CCTGGTCCAGAGACTGGAGCCTGTCATCATGGAGCTGGAGAGGCAAGAGAATGTGCTGGTCATCTGCCACCAGGC}$ TGTGATGCGCTGCCTGCCTACCTCCTCGACAAGGCAGCAGCAGCAGCTGCCCTACCTCAAGTGTCCGCTGCA CACAGTCCTGAAGCTGACTCCTGTGGCATATGGTTGTAAAGTGGAGTCCATATTCCTGAACGTGGCTGCTGTGAA CACGCACCGGGACAGGCCTCAGAACGTGGACATCTCAAGACCTCCAGAGGAAGCCCTTGTCACGGTGCCTGCTCA ACCCCAGCCCACCTGGCTCTTTGTTGACAGTCGGCGACAAGGTTGTGCGTGGCTCCTGACCTGCTAAGAGTC ACTTGACCAGACTGCATCTGCATGGGCTGCGCGGAGGTTGCCCAGCCCCAGTTTCTTCCGGCGCAGCTCTTAGGT GTTCCTACTGTGGCCCAGCTGCCCAGCATGGACCTGGTGACTCTCCACAGGGCCTCTACCATCCTCTGTGGCC ACTTCCTGAGCCAGAGGCCAGGTCTTCATGGGGCCCTGAGCTTCTGCTGCTGTGAGAGGGAGAGCCCTTCC CATCCTTACCCACCAGGAACTAGAGCCCCAACCACAGCAGATGCTTCCTGGGCAGCCACTGGCCAGGCCGTTGTA GAGGGCAGGGGGCAGTTGTGGCCCCCCCCCCCCAGTTGTGCATGTACCCGGCTACTTAGGTATGCTTAGGGGAG ${\tt CCAATGGGGAGGCGGCCTCTCCCCTGTTGCTGCCCGTGTCCACACAGGAATGTACACTGGTGGCAGAAACATGCA}$ TTTGCCATAAATAATTCAGAAAC

CTTCAGCAAGGACCAGTTCCCAGAGGTGTATGTGCCCACAGTGTTTGAGAACTATGTGGCAGATATCGAGGTGGA TGGAAAGCAGGTAGAGTTGGCTTTGTGGGACACAGCTGGGCAGGAAGATTATGATCGCCTGAGGCCCCTCTCCTA CCCAGATACCGATGTTATACTGATGTTTTTCCATCGACAGCCCTGATAGTTTAGAAAACATCCCAGAAAAGTG GACCCCAGAAGTCAAGCATTTCTGTCCCAACGTGCCCATCATCCTGGTTGGGAATAAGAAGGATCTTCGGAATGA TGAGCACAAGGCGGGAGCTAGCCAAGATGAAGCAGGAGCCGGTGAAACCTGAAGAAGGCAGAGATATGGCAAA CAGGATTGGCGCTTTTGGGTACATGGAGTGTTCAGCAAAGACCAAAGATGGAGTGAGAGAGGTTTTTGAAATGGC $ext{TACGAGAGCTGCTCTGCAAGCTAGACGTGGGAAGAAAAATCTGGGTGCCTTGTCTTG} { ext{TGA}} ext{AACCTTGCTGCAAG}$ CACAGCCCTTATGCGGTTAATTTTGAAGTGCTGTTTATTAATCTTAGTGTATGATTACTGGCCTTTTTCATTTAT CTATAATTTACCTAAGATTACAAATCAGAAGTCATCTTGCTACCAGTATTTAGAAGCCAACTATGATTATTAACG ATGTCCAACCCGTCTGGCCCACCAGGGTCCTTTTGACACTGCTCTAACAGCCCTCCTCTGCACTCCCACCTGACA AATTAGGCTGTAACTACTTTATAACTAACATGTCCTGCCTATTATCTGTCAGCTGCAAGGTACTCTGGTGAGTCA CCACTTCAGGGCTTTACTCCGTAACAGATTTTGTTGGCATAGCTCTGGGGTGGGCAGTTTTTTTGAAAATGGGCTC AAATAAAGTCAGATGGAAAATTCATTTTTTAAATTCCCGTTTTGTCACTTTTTCTGATAAAAGATGGCCATATTA CCCCTTTTCGGCCCCATGTATCTCAGTACCCCATGGAGCTGGGCTAAGTAAATAGGAATTGGTTTCACGCCTGAG GCAATTAGACACTTTGGAAGATGGCATAACCTGTCTCACCTGGACTTAAGCATCTGGCTCTAATTCACAGTGCTC TTTTCTCCTCACTGTATCCAGGTTCCCTCCCAGAGGAGCCACCAGTTCTCATGGGTGGCACTCAGTCTCTTCT CTCCAGCTGACTAAACTTTTTTTCTGTACCAGTTAATTTTTCCAACTACTAATAGAATAAAGGCAGTTTTCT

MAAIRKKLVIVGDGACGKTCLLIVFSKDQFPEVYVPTVFENYVADIEVDGKQVELALWDTAGQEDYDRLRPLSYP DTDVILMCFSIDSPDSLENIPEKWTPEVKHFCPNVPIILVGNKKDLRNDEHTRRELAKMKQEPVKPEEGRDMANR IGAFGYMECSAKTKDGVREVFEMATRAALQARRGKKKSGCLVL

TGAGCCCCAGCTAAGCGCTGCCCTTGAGTATGTGCGGAGTCACCCCTTGGACCCCATCGACACTGTGGACTTCGA GCGGGAATGTGGCGTGGTGTCATTGTGACCCCAGAGCAGATTGAGGAGGCTGTGGAGGCTGCTATTAACAGGCA GTGGGCAGATGGCAAAATGATCAAGAATGAAGTGGACATGCAGGTCCTCCACCTTCTGGGCCCCAAGTTGGAGGC TGATCTGGAGAAGAAGTTCAAGGTGGCAAAAGCTCGGCTAGAAGAACAGACCGGAGGACGGCAAAGGATGTGGT GCCTGGTGAGAACTACAAGACCCCAGGCTATGTGGTCACTCCACACACCATGAATCTACTAAAGCAGCACCTGGA GATTACTGGTGGGCAGGTACGTACCCGGTTCCCGCCAGAACCCAATGGAATCCTGCATATTGGACATGCCAAAGC CATCAATTTCAACTTTGGCTATGCCAAGGCCAACAATGGCATCTGTTTTCTGCGTTTTGATGACACCAACCCTGA GAAGGAGGAAGCAAAGTTCTTCACGGCCATCTGTGACATGGTAGCCTGGCTAGGCTACACACCTTACAAAGTCAC ATATGCGTCTGACTATTTTGACCAGCTATATGCGTGGGCTGTGGAGCTCATCCGCAGGGGTCTGGCTTATGTGTG CCACCAGCGAGGAGGAGCTCAAAGGCCATAATACTCTGCCTTCACCCTGGAGAGACCGTCCCATGGAGGAGTC ACTGCTGCTCTTTGAGGCAATGCGCAAGGCCAAGTTTTCAGAGGGCGAGGCCACACTACGGATGAAGCTGGTGAT GGAGGATGGCAAGATGGACCCTGTAGCCTATCGAGTCAAGTATACACCACCACCCGCACAGGGGACAAATGGTG GGAATTCCAGGCCCG

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FIGURE 1140A

GAAGGCAGTTTCCGGAGGGAAGGGGTAGGGTTGGGGTGGGGGCGCTCTCCGCCCGGTGTTGCGCTCCTTCCCAGA ATCCGCTCCGGCCTTTCCTTCCTGCCGCGATTCCCAACTTTGCTCAAAGTCGCTGGACTCTAAGCTGTCGGAGGG ACCGCTGGACAGACCTGGGAACTGACAGAGGGCCTGGAGGGAAACAGGCCAAAGACCCACAGGCAGAGTTGACAC GGAACCCCAAAGCAAGGAGGAGGGCTCGGGCCCGAGACCGTTCACCTCCCCTTATCCCTGTTCCCCTCTTCAGGA TGGAGCTGACCTCAAGGGAAAGAGGGGAGGGGACAGCCTCTGCCCTGGGAACTTCGACTGGGCCTACTGCTAAGCG GTGAGAGGGCCTGGTGGGGGCTTGTGGAATGTGATGGTAGTCCCTGGGAGTTGCCCTTGGGGCACATGA AGAATGGTATCCCTGCGGTCACCATCCAGCTGGACCTGGAGGCTGAGTTTCATTACACACCCTCATTATGACCT TCAAGACATTTCGCCCTGCTGCCATGCTGGTGGAACGCTCAGCAGACTTTGGCCGCACCTGGCATGTGTACCGAT ATTTCTCCTATGACTGTGGGGCTGACTTCCCAGGAGTCCCACTAGCACCCCCACGGCACTGGGATGATGTAGTCT GTGAGTCCCGCTACTCAGAGATTGAGCCATCCACTGAAGGCGAGGTCATCTATCGTGTGCTGGACCCTGCCATCC CTATCCCAGACCCCTACAGCTCACGGATTCAGAACCTGTTGAAGATCACCAACCTACGGGTGAACCTGACTCGTC TACACACGTTGGGAGACAACCTACTCGACCCACGGAGGGGAGATCCGAGAGAAGTACTACTATGCCCTCTATGAGC TGGTTGTACGTGGCAACTGCTTCTGCTACGGACACGCCTCAGAGTGTGCACCCGCCCCAGGGGCCACCAGCCCATG ACACCCACAGCTGCCACTTCGACATGGCCGTATACCTGGCATCTGGCAATGTGAGTGGAGGTGTGTGATGGAT GGGATCCGGCTGTGTGCCGCTCCTGTGATTGTGACCCCATGGGTTCTCAAGACGGTGGTCGCTGTGATTCCCATG ATGACCCTGCACTGGGACTGGTCTCCGGCCAGTGTCGCTGCAAAGAACATGTGGTGGGCACTCGCTGCCAGCAAT GCCGTGATGGCTTCTTTGGGCTCAGCATCAGTGACCGTCTGGGCTGCCGGCGTATGTCAATGTAATGCACGGGGC ACAGTGCCTGGGAGCACTCCTTGTGACCCCAACAGTGGATCCTGTTACTGCAAACGTCTAGTGACTGGACGTGGA TGTGACCGCTGCCTGGCCACTGGGGCCTGAGCCACGACCTGCTCGGCTGCCCCCTGTGACTGCGACGTG GGTGGTGCTTTGGATCCCCAGTGTGATGAGGGCACAGGTCAATGCCACTGCCGCCAGCACATGGTTGGGCGACGC TGTGAGCAGGTGCAACCTGGCTACTTCCGGCCCTTCCTGGACCACCTAATTTGGGAGGCTGAGGACACCCGAGGG CAGGTGCTCGATGTGGTGGAGCGCCTGGTGACCCCCGGGGAAACTCCATCCTGGACTGGCTCAGGCTTCGTGCGG CTACAGGAAGGTCAGACCCTGGAGTTCCTGGTGGCCTCTGTGCCGAAGGCTATGGACTATGACCTGCTGCTGCGC AGCCTGTGTGGGCATTTGGTGCCCAAGGATGATCGCATCCAAGGGACTCTGCAACCACATGCCAGGTACTTGATA TTTCCTAATCCTGTCTGCCTTGAGCCTGGTATCTCCTACAAGCTGCATCTGAAGCTGGTACGGACAGGGGGAAGT GCCCAGCCTGAGACTCCCTACTCTGGACCTGGCCTGCTCATTGACTCGCTGGTGCTGCTGCCCCGTGTCCTGGTG CTAGAGATGTTTAGTGGGGGTGATGCTGCCCTGGAGCGCCAGGCCACCTTTGAACGCTACCAATGCCATGAG GAGGGTCTGGTGCCCAGCAAGACTTCTCCCTCTGAGGCCTGCGCACCCCTCCTCATCAGCCTGTCCACCCTCATC TACAATGGTGCCCTGCCATGTCAGTGCAACCCTCAAGGTTCACTGAGTTCTGAGTGCAACCCTCATGGTGGTCAG TGCCTGTGCAAGCCTGGAGTGGTTGGGCCCCTGTGACCTCTGTGCCCCTGGCTACTATGGCTTTGGCCCCACA GGCTGTCAAGCCTGCCAGTGCAGCCACGAGGGGGCACTCAGCAGTCTCTGTGAAAAGACCAGTGGGCAATGTCTC TGTCGAACTGGTGCCTTTGGGCTTCGCTGTGACCGCTGCCAGCGTGGCCAGTGGGGATTCCCTAGCTGCCGGCCA TGTGTCTGCAATGGGCATGCAGATGAGTGCAACACCCACACAGGCGCTTGCCTGGGCTGCCGTGATCACACAGGG GGTGAGCACTGTGAAAGGTGCATTGCTGGTTTCCACGGGGACCCACGGCTGCCATATGGGGGCCAGTGCCGGCCC TGTCCCTGTCCTGAAGGCCCTGGGAGCCAACGGCACTTTGCTACTTCTTGCCACCAGGATGAATATTCCCAGCAG ATTGTGTGCCACTGCCGGGCAGGCTATACGGGGCTGCGATGTGAAGCTTGTGCCCCTGGGCACTTTGGGGACCCA TCAAGGCCAGGTGGCCGGTGCCAACTGTGTGAGTGCAGTGGGAACATTGACCCAATGGATCCTGATGCCTGTGAC $\tt CCCCACACGGGGCAATGCCTGCGCTGTTTACACCACACAGAGGGTCCACACTGTGCCCACTGCAAGCCTGGCTTC$ CATGGGCAGGCTGCCCGACAGAGCTGTCACCGCTGCACATGCAACCTGCTGGGCACAAATCCGCAGCAGTGCCCA TCTCCTGACCAGTGCCACTGTGATCCAAGCAGTGGGCAGTGCCCATGCCTCCCAATGTCCAGGGCCCTAGCTGT

FIGURE 1140B

GCCAGAGGCCCCACCTGCAACGAGTTCACAGGGCAGTGCCACTGCCGTGCCGGCTTTGGAGGGCGGACTTGTTCT GAGTGCCAAGAGCTCCACTGGGGAGACCCTGGGTTGCAGTGCCATGCCTGTGATTGTGACTCTCGTGGAATAGAT ACACCTCAGTGTCACCGCTTCACAGGTCACTGCAGCTGCCGCCCAGGGGTGTCTGGTGTGCGCTGTGACCAGTGT CAGGACTTGGCAGCCCGTACACAGCGCCTAGAGCAGCGGGCGCAGGAGTTGCAACAGACGGGTGTGCTGGGTGCC TTTGAGAGCAGCTTCTGGCACATGCAGGAGAAGCTGGGCATTGTGCAGGGCATCGTAGGTGCCCGCAACACCTCA GCCGCCTCCACTGCACAGCTTGTGGAGGCCACAGAGGAGCTGCGGCGTGAAATTGGGGAGGCCACTGAGCACCTG ACTCAGCTCGAGGCAGACCTGACAGATGTGCAAGATGAGAACTTCAATGCCAACCATGCACTAAGTGGTCTGGAG CGAGATAGGCTTGCACTTAATCTCACACTGCGGCAGCTCGACCAGCATCTTGACTTGCTCAAACATTCAAACTTC CTGGGTGCCTATGACAGCATCCGGCATGCCCATAGCCAGTCTGCAGAGGCAGAACGTCGTGCCAATACCTCAGCC GAGGACTTCAACAGCAAACACATGGCCAACCAGCGGGCACTTGGCAAGCTCTCTGCCCATACCCACACCCTGAGC CTGACAGACATAAATGAGCTGGTGTGGGGGCACCAGGGGATGCACCCTGTGCTACAAGCCCTTGTGGGGGTGCC GGCTGTCGAGATGAGGATGGGCAGCCGCGCTGTGGGGGCCTCAGCTGCAATGGGGCAGCGGCTACAGCAGACCTA GCACTGGGCCGGGCCCGGCACACACAGGCAGAGCTGCAGCGGGCACTGGCAGAAGGTGGTAGCATCCTCAGCAGA GTGGCTGAGACTCGTCGGCAGGCAAGCGAGGCACAGCAGCGGGCCCAGGCAGCCCTGGACAAGGCTAATGCTTCC AGGGGACAGGTGGAACAGGCCAACCAGGAACTTCAAGAACTTATCCAGAGTGTGAAGGACTTCCTCAACCAGGAG GGGGCTGATCCTGATAGCATTGAAATGGTGGCCACACGGGTGCTAGAGCTCTCCATCCCAGCTTCAGCTGAGCAG ATCCAGCACCTGGCGGGTGCGATTGCAGAGCGAGTCCGGAGCCTGGCAGATGTGGATGCGATCCTGGCACGTACT GTAGGAGATGTGCGTCGTGCCGAGCAGCTACTGCAGGATGCACGGCGGGCAAGGAGCTGGGCTGAGGATGAGAAA CAGAAGGCAGAGACAGTACAGGCAGCACTGGAGGAGGCCCAGCGGGCACAGGGTATTGCCCAGGGTGCCATCCGG GGGGCAGTGGCTGACACACGGGACACAGAGCAGACCCTGTACCAGGTACAGGAGAGGATGCAGGTGCAGAGCGG GCACTGAGCTCTGCAGGTGAAAGGGCTCGGCAGTTGGATGCTCTCCTGGAGGCTCTGAAATTGAAACGGGCAGGA CTACGCGGTCCTCTGGGTGATCAGTACCAGACGGTGAAGGCCCTAGCTGAGCGCAAGGCCCAAGGTGTGCTGGCT GCACAGGCAAGGGCAGAACAACTGCGGGATGAGGCTCGGGACCTGTTGCAAGCCGCTCAGGACAAGCTGCAGCGG CTACAGGAATTGGAAGGCACCTATGAGGAAAATGAGCGGGCACTGGAGAGTAAGGCAGCCCAGTTGGACGGGTTG GAGGCCAGGATGCGCAGCGTGCTTCAAGCCATCAACTTGCAGGTGCAGATCTACAACACCTGCCAGTGACCCCTG AGGGCCCCCAATAAACCAGTGTGAACCCCC

TGGCAGAATCAAGATGAGGCCCTGTCATGCCTCCCCAGTGAGGCCTACAGTCTGAGCAGACAGCATGGCCTGCCA GGTGCAGCTGCGGTAGTTCTGGGCAAGCAGGTGCTAGTGGTGGTGGTGGTGGATGAGGTCCAGAGCCCGGTAGCT GCAACTGTGGAGAGAGATGGTATGGTGTATGCTCTGGGGGGGAATGGGCCCTGACACGGCCCCCAGGCCCAGGTA TTCCTGCACGGGAACAAGATCTATGTCCTGGGGGGCCCCCGGGCAAGCTCCCGGTGACTGCTTTTGAAGCCTTT GAAGGCAGCGTCTTTAGCCTGGGTGGCCTGCAGCAGCCTGGGCCCCACAACTTCTACTCTCGCCCCACACTTTGTC AACACTGTGGAGATGTTTGACCTGGAGCATGGGTCCTGGACCAAATTGCCCCGCAGCCTGCGCATGAGGGATAAG AGGGCAGACTTTGTGGTTGGGTCCCTTGGGGGCCACATTGTGGCCATTGGGGGCCTTGGAAACCAGCCATGTCCT TCCTGCTCTAGTCTGCAGGCTGGGCCCCGGCTGTTTGTTATTGGGGGTGTGGCCCAGGGCCCCAGTCAAGCCGTG GAGGCACTGTGTCTGCGTGATGGGGTCTGAAGGCTTGGTGGGAGCTGTCCACTGGAGCAGCTCATTGCCAGAGGC TACCCCAGTTGCCATTCCTGAAAAATCTCAGCTGCCAGGCTGCCTTTAGGGTCCCTGCAGACCCAGGAGAGTTGA GAGGGTGGGGGACACAGAGAGAATAGAGAGGATGTGGGAACTGCCAGAGGGCCGGAGCGCAGGAGTTCAAGTGGA GGAATGCTGGCTTTGAGCCCTCTACACTGCTGGTTGTATGACCTTGGACAAGTCACTTCACCTCTCTGTGCCTCA GCATCCTCATCTATAAATGGGGATCTCTGAAACCTTCCTACCCTACCTCACAGGGCTGTTGTGAGGACCCA GGGAGTTTGGATGTGGAAGTAAAAGTGCTGCTAAAACCTA

MSAGGGRAFAWQVFPPMPTCRVYGTVAHQDGHLLVLGGCGRAGLPLDTAETLDMASHTWLALAPLPTARAGAAAV VLGKQVLVVGGVDEVQSPVAAVEAFLMDEGRWERRATLPQAAMGVATVERDGMVYALGGMGPDTAPQAQVRVYDP RRDCWLSLPSMPTPCYGASTFLHGNKIYVLGGRQGKLPVTAFEAFDLEARTWTRHPSLPSRRAFAGCAMAEGSVF SLGGLQQPGPHNFYSRPHFVNTVEMFDLEHGSWTKLPRSLRMRDKRADFVVGSLGGHIVAIGGLGNQPCPLGSVE SFSLARRRWEALPAMPTARCSCSSLQAGPRLFVIGGVAQGPSQAVEALCLRDGV

ACGGTGCACACTGAGTGGACCCAGAGGGACCTGGAACGCATGGAGAACATTCGATTCTGCCGCCAATACCTGGTG TTCCATGACGGGGACTCAGTGGTGTTTGCAGGACCTGCAGGCAACAGTGTGGAGACCCGGGGGGAACTGCTGAGC TTCCTGGAGGTCTGGGAGAAGAACCGGAAGCTCAAGAGCTTCAACCTGTCAGCGCTGGAGAAACATGGGCCTGTT TATGAGGATGACTGCTTTGGCTGCCTGTCCTGGTCGCACTCGGAGACACTTGTTGTATGTGGCAGAGAAGAAG CGCCCCAAGGCCGAGTCCTTCTTTCAGACCAAAGCCTTGGACGTCAGTGCCAGCGATGATGAGATAGCCAGGCTG AAGAAGCCAGACCAAGCCATCAAGGGGGATCAGTTTGTGTTTTATGAAGACTGGGGAGAAAACATGGTTTCCAAA AGCATCCCTGTGCTCTGCGTGCTGGATGTCGAGAGTGGCAACATCTCTGTGCTTGAGGGGGTCCCTGAGAATGTG TTGGGCATCCGCTTTTGCACCAATCGCAGGTCAGCCCTGTATTATGTGGACCTCATCGGGGGGAAGTGTGAGCTC ${\tt CCATCTCTGATCCCCCATCACCAATGCAGCCAGCTGTGCCTGTATGACTGGTATACCAAGGTTACCTCAGTGGTG}$ GTAGATGTTGTGCCTCGGCAGCTGGGAGAGAACTTCTCTGGGATCTACTGCAGCCTTCTGCCTTTGGGATGCTGG ${\tt TCAGCTGACAGCCAGAGAGTGGTCTTTGACTCGGCTCAGCGCAGCCGGCAGGACCTGTTTGCTGTGGACACCCAA}$ GTGGGCACTGTGACCTCCCTCACAGCTGGAGGGTCAGGTGGGAGCTGGAAGTTGCTCACAATTGACCAGGACCTC ATGGTGGCACAGTTTTCCACACCCAGCCTACCTCCAACCCTGAAAGTTGGGTTCCTGCCTTCTGCAGGGAAGGAG CCACCCCAGAGCAAGAGAATGTGCAGTATGCTGGCCTTGACTTTGAAGCAATCCTGCTGCAGCCTGGCAGCCCT CCAGATAAGACCCAAGTGCCCATGGTGGTCATGCCCCACGGGGGGCCCCATTCATCCTTTGTCACTGCCTGGATG $\tt CTGTTCCCAGCCATGCTTTGCAAGATGGGCTTTGCGGTACTACTAGTGAACTATCGTGGCTCCACGGGCTTTGGC$ GTGCTCCAGGAGGAACACTTTGATGCAAGCCATGTGGCCCTTATGGGTGGTTCCCATGGTGGCTTCATTTCCTGC CACTTGATTGGTCAGTACCCAGAGACCTACAGGGCCTGCGTGGCCCGGGAACCCCGTGATCAACATCGCCTCCATG $\tt CTCAGCGTGTGGGCTGAGATGCTGGACAAATCGCCCATCAGATACATCCCTCAGGTGAAGACACCACTGTTACTG$ ATGTTGGGCCAGGAGGACCGGCGTGTGCCCTTCAAGCAGGGCATGGAGTATTACCGTGCCCTCAAGACCCGGAAT ATGAATGCTGTGCTCTGGCTACGCACACTTGGGCAGC<u>TGA</u>AGCCCTGCCATTCTGCATGAGCTGATCAGCCTG TGCCACACTTCGCTCTTGAGGAGCTCAACGGTCTGGCAGGGCAGCAGGAGGCTTTCTGGGCTCTGGACTCCACGG ATGCGTGGGCAGAGGAATGTGGGCTATGTAGTCATAATAAATTAGGAC

MERQVLLSEPEEAAALYRGLSRQPALSAACLGPEVTTQYGGQYRTVHTEWTQRDLERMENIRFCRQYLVFHDGDS
VVFAGPAGNSVETRGELLSRESPSGTMKAVLRKAGGTGPGEEKQFLEVWEKNRKLKSFNLSALEKHGPVYEDDCF
GCLSWSHSETHLLYVAEKKRPKAESFFQTKALDVSASDDEIARLKKPDQAIKGDQFVFYEDWGENMVSKSIPVLC
VLDVESGNISVLEGVPENVSPGQAFWAPGDAGVVFVGWWHEPFRLGIRFCTNRRSALYYVDLIGGKCELLSDDSL
AVSSPRLSPDQCRIVYLQYPSLIPHHQCSQLCLYDWYTKVTSVVDVVPRQLGENFSGIYCSLLPLGCWSADSQR
VVFDSAQRSRQDLFAVDTQVGTVTSLTAGGSGGSWKLLTIDQDLMVAQFSTPSLPPTLKVGFLPSAGKEQSVLWV
SLEEAEPIPDIHWGIRVLQPPPEQENVQYAGLDFEAILLQPGSPPDKTQVPMVVMPHGGPHSSFVTAWMLFPAML
CKMGFAVLLVNYRGSTGFGQDSILSLPGNVGHQDVKDVQFAVEQVLQEEHFDASHVALMGGSHGGFISCHLIGQY
PETYRACVARNPVINIASMLGSTDIPDWCVVEAGFPFSSDCLPDLSVWAEMLDKSPIRYIPQVKTPLLLMLGQED
RRVPFKQGMEYYRALKTRNVPVRLLLYPKSTHALSEVEVESDSFMNAVLWLRTHLGS

TACTCCCGGAGTCACTCATCCCTTAAGCAAGCAGGGTGGGGTTAGGTGCGCGTGCGCGGTTTTAATACTCCTCCC GCATCCAGCTGGCGTGGGGGTTCTACGGGAATACAGTGACCGGGTTGTATCACCGTCCAGGTCTGGGTGGTCAGA ATGGATCCACGCCTGATGGCTCCACGCATTTCCCTTCGTGGGAAATGGCAGCAAACGAACCTCTCAAAACCCACA CTCTTCTGCCTCTTAAGCCTGCTCCCTCACCCAGGCACTGGGCAAGTGAAGAGTTTGCCTGTACTCTTATCTGGG TGCCTTAAGGAGAGAGTTGTGTTCTTCCTCTCAGGGGTGATAACTCAGGAAGCCTCTGGGTTGGGAAGACCA TCAGTTCTTTTGTCTTAGGTTTCTTTTCCTGTCCCTCTTCCATCCCCAAGATGTGACCCCATAAAAATTTTTCCT AGGAGTTCGAGACCAGCCTGACCAACATGGTGAAAAACCCCCATCTCTACTAAAAATACAAAAATTAGCCGGGTGTG GTGGCACACCAGTAATCCCAGCTACTCGGGAGGCTGAAGCAGGAGATTTGCTTGAACCTGGGAGGCAGAGGTT TTCCTGAGAGGAAGCCTGAGGTTGACCAGCTCTGGGGTTTGTAAGGCAGGTCTGTTTTCTCCTAGGCCCTGAGTT TTCTGAATCTCTGGTTTTGCTTTGTTGGCAAGGAGCCAGGGAATCCTGACCTGAGCCAGACCTTAAGCTCTATGG TTATTTAGCTGGCCATTCAGGTATAAGGCAGGGTGGTGTACCTGCTGGCACTATCCAGATGGAGGCACCAAACAC CCACATACCTGGCCCAACCAGACTTCTCCCGTGAGCCAGGCAAAGGAAATTGTCATCTGCCAACTGTCCTACTCA TATTCCTCTCAGTCCTTCTTGGGGGTAAGCTGATTACCTGAAGGACAGCTGAACCCCTGGGGTAGCCTCCTATCC ACCACTGCTTAAGTGCCTATGGGAATGTGGGTCTGCACCTTGTCCCCTCATAGGATGGTACCAAGCATTTAGTGC ACAGTGGCCCCATCATAGCCTGCAGCCTCATCATTTCCCATCTGGACCTGGTACAAATGCACGTCACAGGCTCAG CTCCTCCCCACTAGCATCTTCTCTACCTTCAAGAACCAGGCAGCCCTGCCATGTCACAATAGGCCAGGGGAGTTT CCAAAGATGTGGGTGGCAAATGCCCCTATAGAAACACCAGTACCTGAAAGCACTGTAGCCCTGGACCTGCCTCCT TCCCTCGGGGCCATACTTCTGTTTCCATCTGCTGGGCCACCAGCCACTTTAGTGACCCCTGCCTACTTCCT GTTGGATATCATACTTCCATCTGGCTGCCTTTGCTTAAGCCATCTTTGTGGTAGAGGGGCCCTGGAATTGCAGCT CACCCCAGGCTCAACTGAGGATGTGGCTTATTAAACACGGAAGTGC

 ${\tt MAESWSGQALQALPATVLGALGSEFLREWEAQDMRVTLFKLLLLWLVLSLLGIQLAWGFYGNTVTGLYHRPGLGG} \\ {\tt QNGSTPDGSTHFPSWEMAANEPLKTHRE}$

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FIGURE 1147

CCGAGCGCTCTAAGATGATCGACAAGAACCTGCGGGAGGACGGAGAAGGCGGCGCGGGAGGTGAAGTTGCTGC TGTTGGGTGCTGGGGAGTCAGGGAAGAGCACCATCGTCAAGGAGGATGAAGATCATCCACGAGGATGGCTACTCCG AGGAGGAATGCCGGCAGTACCGGGCGGTTGTCTACAGCAACACCATCCAGTCCATCATGGCCATTGTCAAAGCCA TGGGCAACCTGCAGATCGACTTTGCCGACCCCTCCAGAGCGGACGACGCCAGGCAGCTATTTGCACTGTCCTGCA CCGCCGAGGAGCAAGGCGTGCTCCCTGATGACCTGTCCGGCGTCATCCGGAGGCTCTGGGCTGACCATGGTGTGC TTGCACAGAGTGACTACATCCCCACACAGCAAGATGTGCTACGGACCCGCGTAAAGACCACGGGGATCGTGGAGA TCCACTGCTTTGAGGGCGTCACAGCCATCATCTTCTGCGTAGCCTTGAGCGCCTATGACTTGGTGCTAGCTGAGG ${\tt ACGAGGAGATGAACCGCATGCATGAGGCATGAAGCTATTCGATAGCATCTGCAACAACAAGTGGTTCACAGACA}$ ${\tt CGTCCATCATCCTCTCAACAAGAAGGACCTGTTTGAGGAGAAGATCACACAGTCCCCTGACCATCTGCT}$ ${\tt AGCGCAAAGACACCAAGGAGATCTACACGCACTTCACGTGCGCCACCGACACCAAGAACGTGCAGTTCGTGTTTG}$ GGATGGGCCACCGCCGACTTTGTACCCCCCAACCCCTGAGGAAGATGGGGGCAAGAAGATCACGCTCCCCGCCTG TTCCCCCGCCGCTTTTCTCCTCTTTTCTCTCTTTTCTCAGCTCCCCTGTCCCCTCAGCTCCAGACGTAGGGG AGGGGTTGCCACAGGCCTCCCTGTTTGAAGCCTGCCCTTGTCTGAGATGCTGGTAATGGCCATGGTACCCCCTTC GGCTGCGTCTGGAGGGGCCCCTGCTTCTCCAGCCTGGACCCCAGCTTTGCCCAACACCAGCCCCTGCCCCAGCC CAAGTCCAAATGTTTACAGGGAGCCTCCTGCCCAGTCCCCAACCCCAGCCGCTCGGAGGCCCCAAAGGAAAAAG CACAAGAAGCGTGAGACGCCACCATTCCTGGAAACCACAGTCC

MGCTVSAEDKAAAERSKMIDKNLREDGEKAAREVKLLLLGAGESGKSTIVKQMKIIHEDGYSEEECRQYRAVVYS
NTIQSIMAIVKAMGNLQIDFADPSRADDARQLFALSCTAEEQGVLPDDLSGVIRRLWADHGVQACFGRSREYQLN
DSAAYYLNDLERIAQSDYIPTQQDVLRTRVKTTGIVETHFTFKDLHFKMFDVGGQRSERKKWIHCFEGVTAIIFC
VALSAYDLVLAEDEEMNRMHESMKLFDSICNNKWFTDTSIILFLNKKDLFEEKITHSPLTICFPEYTGANKYDEA
ASYIQSKFEDLNKRKDTKEIYTHFTCATDTKNVQFVFDAVTDVIIKNNLKDCGLF

73

TCTGTGATTGTGGCCAGGCGGGGCACCCTCGGAGGGGAGGGTTCGGAAGTGGAATGCGACCCCCAGCCTCTTTC $\mathtt{AGCTGCTGAG}$ GAGTGCCGCCCCAGCCCCCACGCCTTCGGCTCTCCTTCCAAGAGCTCCAGGCCTGGCATGGTCTCCAGACTTT CAGCCTGGAGCGAACCTGCTGCTACCAGGCCTTGCTGGTGGATGAGGAGCGTGGACGCCTGTTTGTGGGTGCCGA ATGGCGAGAGGAGTGCAACTGGGCAGGGAAGGACATTGGTACTGAGTGCATGAACTTCGTGAAGTTGCTGCATGC CTACAACCGCACCCATTTGCTGGCCTGTGGCACGGGAGCCTTCCACCCAACCTGTGCCTTTGTGGAAGTGGGCCA CAGGCATCGGGCTGCCTCCGTGCTGGGGGGGGGGGGGCTATACTCAGGGGTGGCAGCAGACCTCATGGGACGAGA CTTTACCATCTTTCGCAGCCTAGGGCAACGTCCAAGTCTCCGAACAGAGCCACACGACTCCCGCTGGCTCAATGA GCCCAAGTTTGTCAAGGTATTTTGGATCCCGGAGAGCGAGAACCCAGACGACAAAATCTACTTCTTTCG TGAGACGGCGGTAGAGGCGGCGCGCACTGGGACGCCTGTCCGTGTCCCGCGTTGGCCAGATCTGCCGGAACGA $\tt CGTCGAGGGCGACACCCACTTCGATCAGCTCCAGGATGTGTTTCTGTTGTCCTCGCGGGACCACCGGACCCCGCT$ GCTCTATGCCGTCTTCTCCACGTCCAGCATCTTCCAGGGCTCTGCGGTGTGCGTGTACAGCATGAACGACGT GCGCCGGGCCTTCTTGGGACCCTTTGCACACAAGGAGGGCCCCATGCACCAGTGGGTGTCATACCAGGGTCGCGT $\tt CCCCTACCCGCGGCCAGGCATGTGCCCCAGCAAGACCTTTGGCACCTTCAGTTCCACCAAGGACTTCCCAGACGA$ TGTCATCCAGTTTGCGCGGAACCACCCCTCATGTACAACTCTGTCCTGCCCACTGGGGGGGCCCCTCTTTTCCT ACAAGTTGGAGCCAATTACACCTTCACTCAAATTGCCGCGGACCGGGTTGCAGCCGCTGACGGACACTATGACGT CCTCTTCATTGGCACAGACGTTGGCACGGTGCTGAAGGTGATCTCGGTCCCCAAGGGCAGTAGGCCCAGCGCAGA GGGGCTGCTCCTGGAGGAGCTGCACGTGTTTGAGGACTCGGCCGCTGTCACCAGCATGCAAATTTCTTCCAAGAG GCACCAGCTGTACGTAGOCTCGCGGAGCGCGGTGGCCCAGATCGCGTTGCACCGCTGCCCTGCCCACGGCCGCGT TGCCAAGAGGCGGTTCCGGCGGCAAGACGTAAGGAATGGCGACCCCAGCACGTTGTGCTCCGGAGACTCGTCTCG GCAGGCGCGCGTGGAGTGGACTTTCCAGCGCGCAGGGGTGACAGCCCACACCCAGGTGCTGGCAGAGGAGCGCAC CGAGCAGGGCTTTACGCAACCGCTGCGCCTGTCGCTGCACGTGTTGAGTGCTACGCAGGCCGAACGACTGGC GCGGGCCGAGGAGGCTGCGCCGCCGCCGCCGCCCGAACTCTGGTACCGGGACTTTCTGCAGCTGGTGGA GCCGGGCGGAGGTGGCAGCGCGAACTCCCTGCGCATGTGCCGCCGCAGCCTGCGCTGCAGTCACTGCCCCTGGA GTCGCGGAGAAAGGGCCGTAACCGGAGGACCCACGCCCCTGAGCCTCGCGCTGAGCGGGGGCCGCGCAGCGCAAC TGAAAAGAAGGACGGGTTGGGGCCGGCACATTGGGGGTCACCGGCCGATGGAGACACCAACCGACAGGCCCTGG CTGAGGGCAGCTGCGCGGGCTTATTTATTAACAGGATAACCCTTGAATGTAGCAGCCCCGGGAGGGCCGCACAGG TCGGGCGCAGGATTCAGCCGGAGGGAAGGGACGGGAAGCCGAGCTCCAGAGCAACGACCAGGGCCGAGGAGGTG CCTGGAGTGCCCACCCTGGGAGACAGACCCCACCTCCTTGGGTAGTGAGCAGTGAGCAGAAAGCTGTGAACAGGC TGGGCTGCTGGAGGTGGGGCGAGGCCGACTGTACTAAAGTAACGCAATAAACGCATTATCAGCCA

MGRAGAAAVIPGLALLWAVGLGSAAPSPPRLRLSFQELQAWHGLQTFSLERTCCYQALLVDEERGRLFVGAENHV ASLNLDNISKRAKKLAWPAPVEWREECNWAGKDIGTECMNFVKLLHAYNRTHLLACGTGAFHPTCAFVEVGHRAE EPVLRLDPGRIEDGKGKSPYDPRHRAASVLVGEELYSGVAADLMGRDFTIFRSLGQRPSLRTEPHDSRWLNEPKF VKVFWIPESENPDDDKIYFFFRETAVEAAPALGRLSVSRVGQICRNDVGGQRSLVNKWTTFLKARLVCSVPGVEG DTHFDQLQDVFLLSSRDHRTPLLYAVFSTSSSIFQGSAVCVYSMNDVRRAFLGPFAHKEGPMHQWVSYQGRVPYP RPGMCPSKTFGTFSSTKDFPDDVIQFARNHPLMYNSVLPTGGRPLFLQVGANYTFTQIAADRVAAADGHYDVLFI GTDVGTVLKVISVPKGSRPSAEGLLLEELHVFEDSAAVTSMQISSKRHQLYVASRSAVAQIALHRCAAHGRVCTE CCLARDPYCAWDGVACTRFQPSAKRRFRRQDVRNGDPSTLCSGDSSRPALLEHKVFGVEGSSAFLECEPRSLQAR VEWTFQRAGVTAHTQVLAEERTERTARGLLLRRLRRRDSGVYLCAAVEQGFTQPLRRLSLHVLSATQAERLARAE EAAPAAPPGPKLWYRDFLQLVEPGGGGSANSLRMCRPQPALQSLPLESRRKGRNRRTHAPEPRAERGPRSATHW

ATGGGCCCCAAAAATCTTGGCGAAGTCACTTTTTTCCACTGCCTGAGGTTTGGCTGTTGCTCCTGTTATCCCAA GCTCTAAGCCCTTCCCATGGTCCCCAGACCCAGGCAGGGGTAGGTCTCGTCTGGAGTGTCCCGCTGCCAAGTGCC CTGAGAAGCCAGTCCTGCCTTGGTGCTCCACTGAGGGACGCTTCGGAGTTAACCACCGTGCACTTGTTCCCGACG CTGCGCGCTCAGGCCTCTGGGATTAGTAGTTTTAGCCTCGTGGATGGCGGGGGCGCCTCGCGAAGATGGTGGCGCG ACACCCACCGGGTCCCTGACCCCGCGCCCCCGCGCCCCGGTTCCCGGCATGCCTCGCGCCCGTAAGGGCAACACG CTCCGGAAGGGTGGTCAGCGCCGTGGAGGAGGTGCCCGGAGCAGTGCCCAAGCTGACTCGGGTTCCAGTGACGAT GAGGCAGCCAGTGAGGCCCGCAGCACCGCCAGTGAATGCCCCAGCCTTCTCAGCACCACTGCAGAGGACAGCCTT GGGGGGGATGTCGTGGATGAGCAGGGCCAGCAGGAAGACCTTGAGGAAAAGCTGAAGGAGTATGTGGACTGTCTC ACAGACAAGAGTGCCAAGACCCGGCAGGGTGCTCTTGAGAGCCTGCGCCTGGCCCTAGCGTCCCGCCTACTCCCC GACTTCTTGCTGGAGCGCCGCCTCACGCTAGCCGATGCCCTGGAAAAGTGCCTCAAGAAAGGGAAGGGCGAGGAA CAAGCCCTGGCTGCTGCTGCTGCTGCTCTGCGTGCAGCTGGGCCCTGGACCTAAGGGTGAGGAGCTGTTT CACAGCCTGCAGCCTCTGCTGGTCTCTGTGCTCAGTGACAGCACAGCTAGCCCTGCTGCCCGGCTCCACTGTGCT TCTGCCCTTGGCCTGGGCTGCTGCCGCTGACATCCAGGACCTGGTCTCTTGCCTTGCCTTAGAA AGTGTTTTCAGCCGGTTCTATGGCTTGGGGGGCAGCTCCACAAGTCCTGTGGTTCCTGCCAGCCTGCACGGCCTG CTCTCTGCTGCCCTGCAGGCCTGGGCATTGCTGCTCACCATCTGCCCTAGCACCCAAATCAGCCACATCCTTGAC AGGCAGCTGCCCCGGCTGCCCCAGCTCTTGTCCAGTGAAAGTGTGAACCTGCGGATCGCTGCCGGTGAAACCATT CTGCGCACTCTGGCCACTGACAGTAACAAGTACCGTGCCAAGGCTGATCGTCGGCGCCAGCGCTCTACTTTCCGC GCCGTGCTGCACTCCGTGGAGGGCGGTGAATGCGAAGAAGAGATAGTGCGCTTCGGCTTTGAGGTGCTCTACATG GACAGCTGGGCTCGGCACCGGATCTACGCTGCCTTCAAGGAAGTGCTGGGTTCGGGCATGCACCACCACCTCCAG AACAATGAGCTACTCCGTGACATCTTTGGCCTGGGCCCTGTGCTGTTGCTGGATGCCACTGCCCTGAAGGCCTGC AAGGTTCCACGCTTTGAGAAGCACCTGTACAATGCTGCTGCCTTCAAAGCCCGGACCAAGGCTCGAAGCCGTGTG CGGGACAAGCGGCAGACATCCTG**TGA**AGCAGGACCTGCTGAAGAGGAGACTTTCTATGCCCTTGGTCCGTATTT CAGACATGGGGTGGGTAGCTGGGGGCCCGGACACTTGGGACCCCTGACCCCTTTGTCCCTGCACTCAGCCCTGTGG TTCCCTTCCTTTCCTCAGGCCTTGCTCCCCCAGGATGACCCACTCTTAGGGGGGTGGTGGCATCTGGACAA ATGCCACCACAGCAGGTGGGGTGGCAAAGCTACCTGGAATGGATTTGTGTGCTGATTTTTAAGGATTATTACAGA

MGPKKSWRSHFFPLPEVWLLLLLSQALSPSHGPQTQAGVGLVWSVPLPSALRSQSCLGAPLRDASELTTVHLFPT
RGWGARRALWVHSSASASSAASRRRLRAQASGISSFSLVDGGAPREDGGARGVWLPSSGQVSAQRTGRRLVGLEP
TPTGSLTPRPPRPVPGMPRARKGNTLRKGGQRRGGGARSSAQADSGSSDDEAASEARSTASECPSLLSTTAEDSL
GGDVVDEQGQQEDLEEKLKEYVDCLTDKSAKTRQGALESLRLALASRLLPDFLLERRLTLADALEKCLKKGKGEE
QALAAAVLGLLCVQLGPGPKGEELFHSLQPLLVSVLSDSTASPAARLHCASALGLGCYVAAADIQDLVSCLACLE
SVFSRFYGLGGSSTSPVVPASLHGLLSAALQAWALLTICPSTQISHILDRQLPRLPQLLSSESVNLRIAAGETI
ALLFELARDLEEEFVYEDMEALCSVLRTLATDSNKYRAKADRRQRSTFRAVLHSVEGGECEEEIVRFGFEVLYM
DSWARHRIYAAFKEVLGSGMHHHLQNNELLRDIFGLGPVLLLDATALKACKVPRFEKHLYNAAAFKARTKARSRV
RDKRADIL

GGCGCCAGCGGGTCCAAAGCTCGGGGCCTGTGGCCCTTCGCCTCGGCGGCCGGAGGCGGCGGCTCAGAGGCAGCA GGAGCTGAGCAAGCTTTGGTGCGGCCTCGGGGCCGAGCTGTGCCCCCCTTCGTATTCACGCGCCGCGGCTCTATG TTCTATGATGAGGATGGGGATCTGGCTCACGAGTTCTATGAGGAGACAATCGTCACCAAGAACGGGCAGAAGCGG GCCAAGCTGAGGCGAGTGCATAAGAATCTGATTCCTCAGGGCATCGTGAAGCTGGATCACCCCCGCATCCACGTG ${\tt GATTTCCCTGTGATCCTCTATGAGGTG}{\color{blue}{\textbf{TGA}}} {\tt CCCTGGGAGGTGGCAGAAGCACCCCCTGCCCCGGCAAGAAA}$ CTCCCAGGCTCAATCAAGGTGTGGCTTCCATTGAGGAGCCCAGGCTGGGGCCCACAACCCTGAATAAACTCTGTTG GGGCATATACCAGTCAGGAATGCCCGTTACCTGGTTCCTTGCCTGGTCTGCTTTCTTCCAAGTTTGCCTGGGGCC ${\tt TAGCCCTGCTAGAGGCTACAGCCACTTTACAAGCAAGGTATGCTTTCTTCCAGCCCCTAGGCTGTGGGCACTGTAT}$ ACAAGTAGGAACTTCCTTTCACTTCCCTTTTAACCCCTAGTCAGAGCATTTCAGCCGTTTGCTACCTCGAT GGGCTGATCCCCCTACTGCAACTGATGCCCCCCAACCCCGAACCCCCAGTTGAGGAGTTGAGAGAGTGCAG GCTGGGGTCAGGACAGGCTGCGGATGCTTGTGCCTATGGGGAGTTACTCCAACCCACCTATTCTGTCTAATCTCC ATGGCTTTGCACCAAATCCTCCACCCCTCCAATTGGGAGGGGACTGTTCACCACCTTGTGGTAAGGGACAACACC TCAAGGGAAAGCACTAGAACCCCTGGGTAGGGAAAGAAGGAGGGGAAAAACCATAAAAGGAATACTTATAATGTG AAGGTTTGTAAATAGTCCATGATGTCGTGGCAGAGTCTGATTTCTATATAGAGGTGACTTTTTTTAAGTA $\tt CTGTGCAAGCTCTGTGCTTCTATAATGTGGGAAATGGCTTGGGGAGGATGGCCCCTAGCTTAGGAAGACTGTTGT$ GTTATTTGTTCAATTCAATAAAATGATTTGTAGATCCTGC

 ${\tt MGASGSKARGLWPFASAAGGGGSEAAGAEQALVRPRGRAVPPFVFTRRGSMFYDEDGDLAHEFYEETIVTKNGQK} \\ {\tt RAKLRRVHKNLIPQGIVKLDHPRIHVDFPVILYEV}$

GGCACGAGGCTGCGGCCAGCTCCCGCGACCGCCTCTCCTGCCCGGTACCTCAGCAAGGTGCCACTA GTACGCAGTGACCGACGACTACCAGTTGTCCAAGCAGGTGCTGGGCCTGGGTGTGAACGGCAAAGTGCTGGAGTG CTTCCATCGGCGCACTGGACAGAGTGTGCCCTGAAGCTCCTGTATGACAGCCCCCAAGGCCCGGCAGGAGGTAGA CCATCACTGGCAGGCTTCTGGCGGCCCCCATATTGTCTGCATCCTGGATGTGTATGAGAACATGCACCATGGCAA GCGCTGTCTCCTCATCATCATGGAATGCATGGAAGGTGGTGAGTTGTTCAGCAGGATTCAGGAGCGTGGCGACCA GGCTTTCACTGAGAGAGAGAGCTGCAGAGATAATGCGGGATATTGGCACTGCCATCCAGTTTCTGCACAGCCATAA CATTGCCCACCGAGATGTCAAGCCTGAAAACCTACTCTACACATCTAAGGAGAAAGACGCAGTGCTTAAGCTCAC CGATTTTGGCTTTGCTAAGGAGACCACCCAAAATGCCCTGCAGACACCCTGCTATACTCCCTATTATGTGGCCCC TGAGGTCCTGGGTCCAGAGAAGTATGACAAGTCATGTGACATGTGGTCCCTGGGTGTCATCATGTACATCCTCCT TTGTGGCTTCCCACCCTTCTACTCCAACACGGGCCAGGCCATCTCCCCGGGGATGAAGAGGAGGATTCGCCTGGG GACAGACCCCACAGAGAGGCTGACCATCACTCAGTTCATGAACCACCCCTGGATCAACCAATCGATGGTAGTGCC ACAGACCCCACTCCACACGGCCCGAGTGCTGCAGGAGGACAAAGACCACTGGGACGAAGTCAAGGAGGAGATGAC ${\tt CAGTGCCTTGGCCACTATGCGGGTAGACTACGACCAGGTGAAGATCAAGGACCTGAAGACCTCTAACAACCGGCT}$ $\tt CCTCAACAAGAGGAGAAAAAAAGCAGGCAGGCAGCTCCTCTGCCTCACAGGGCTGCAACAACCAG{\color{red}{TAG}CTCATGGG}$ GCCTTGGAGGAGCCTGGCCTCTCAGCCTGCATAACAGACTGAAATGTGCTCAGGCCCTGGCCAGGAGGGCCCAGG GTCATTCTTTTAACAAAAGGATTATTTTGTTGTTGTTTTAATTTGTCACTCGGAACTTCAGGATGGAGGACCCTGA CCCTAAGCCTCCTTCAGATCTCTGGCCCAGGCTCAAGCCCTAGAGATGGGCAGGGCCTAGGGGCTGGGAGCTGCC TGCTGCCATAGCAGCACCTTTAGCTAGGTTGGCCCGAGTGAGGCCTCTGTGCTGTCCTGCCCTGGTGCATGGCCT TAGCTTTCTAGGCCACTGGGAGTTGTGGCTGGGCTTCCCATCTTCCACAGAGACATCTCCCTGTGGGATGGGCAG ATGGGCCTGGCCTTGAGAAAGGCATTGGCCATTGGTTGCCATGGTGACCAGGGACCACGTTGCTGCCTGTGAATG $\tt CTGAGTGAGCGAGTAAGGGAGGGGGGGGGGTTGAGGGTTCACCTCTGCCTTGGGGGAGGCTGATTTCTCACACACT$ ${\tt CCAGCCTGCCTGCAGCCCAGCCCAGATGGCACTCAGCGCTCTCCCCTGAGGGAGTCCCTGGGCCTAGCC}$ ATCCCCTCACTATTCCCGACCCAAAGGGTGACTTTTCATCTGAACTTAAGGTGGGAGATATTTTTAACTTTTTTC CACTTTGGAAAATGTCACTGTGACAAAAGCCAGCATACTTTCCCTGCACCCATCTGCTCACCAGATCTCAGGCAG GAAAGCCCCTCTCTGTTGAAGTCAGGGGCTATCTTTTGGTATACTTGTGAAAGTGGCTGGTTGGGAGCAGAGC TAAGTGGCTTCCCATTAACCTGAGGTCTCTTTCTTTACTCTGGGTCAGACCTGAGGTTGGGGGAAGGCGACTGAGC CATGCTCAGAATGTCTGGTCCTGGCCTTGGGCCTGAGTAGGGCAGAGAGGGCCTTTCATGGCTGATCAGAGCTTAC CAGCCCCACCCACCATGGTAGCCTTAGGGTGCTGAGTGCCTGATACTGCCTGACAAGTGCCTGACACGCAGCCT AGTTCCTTCCTGGCCCCTCTCTCACTGGCTGGGAAACCCTAGACCATGTCAGATAGGACAACACTGCTGGGTTTT ACATCCAGATAGTAATAAACACCATTTCATCATT

MDGETAEEQGGPVPPPVAPGGPGLGGAPGGRREPKKYAVTDDYQLSKQVLGLGVNGKVLECFHRRTGQKCALKLL YDSPKARQEVDHHWQASGGPHIVCILDVYENMHHGKRCLLIIMECMEGGELFSRIQERGDQAFTEREAAEIMRDI GTAIQFLHSHNIAHRDVKPENLLYTSKEKDAVLKLTDFGFAKETTQNALQTPCYTPYYVAPEVLGPEKYDKSCDM WSLGVIMYILLCGFPPFYSNTGQAISPGMKRRIRLGQYGFPNPEWSEVSEDAKQLIRLLKTDPTERLTITQFMN HPWINQSMVVPQTPLHTARVLQEDKDHWDEVKEEMTSALATMRVDYDQVKIKDLKTSNNRLLNKRRKKQAGSSSA SQGCNNQ

TGGCCTCCTCCGGTCTCCTCCTGCAGGTGTTGTTTCGGTTGATCACCTTTGTCTTGAATGCATTTATTCTTCGCT TCCTGTCAAAGGAAATCGTTGGCGTAGTAAATGTAAGACTAACGCTGCTTTACTCAACCACCCTCTTCCTGGCCA GAGAGGCCTTCCGCAGAGCATGTCTCAGTGGGGGCACCCAGCGAGACTGGAGCCAGACCCTCAACCTGCTGTGGC TAACAGTCCCCTGGGTGTTTTTGGTCCTTATTCCTGGGCTGGATCTGGTTGCAGCTGCTTGAAGTGCCTGATC CCTTTTGGGTCTTGGCACAAGCACATATGTTTGTGAAGCTCAAGGTGATTGCAGAGAGCCTGTCGGTAATTCTTA AGAGCGTTCTGACAGCTTTTCTCGTGCTGTGGTTGCCTCACTGGGGATTGTACATTTTCTCTTTGGCCCAGCTTT TTCAAACTCTTCCTGTCTCCAGAATAACAGATCTGTTACCCAATATTACAAGAAATGGAGCGTTTATAAACTGGA TGATGACATTTTTGAATGTATTGAACTTTGGTGATCAGGGTGTGTATGATATAGTGAATAATCTTGGCTCCCTTG TGGCCAGATTAATTTTCCAGCCAATAGAGGAAAGTTTTTATATATTTTTTGCTAAGGTGCTGGAGAGGGGAAAGG ATGCCACACTTCAGAAGCAGGAGGACGTTGCTGTGGCTGCTGCAGTCTTGGAGTCCCTGCTCAAGCTGGCCCTGC TGGCCGGCCTGACCATCACTGTTTTTGGCTTTGCCTATTCTCAGCTGGCTCTGGATATCTACGGAGGGACCATGC TTAGCTCAGGATCCGGTCCTGTTTTGCTGCGTTCCTACTGTCTCTATGTTCTCCTGCTTGCCATCAATGGAGTGA CCTCATTCCTGGTGTTATCCTATCTCTTGACCCGTTGGTGTGGCAGCGTGGGCTTCATCTTGGCCAACTGCTTTA ACATGGGCATTCGGATCACGCAGAGCCTTTGCTTCATCCACCGCTACTACCGAAGGAGCCCCCACAGGCCCCTGG CTGGCCTGCACCTATCGCCAGTCCTGCTCGGGACATTTGCCCTCAGTGGTGGGGTTACTGCTGTTTCGGAGGTAT TCGGGACAGCATTCCTCACAGAGCCAAGCTGATCCATTTCCTCAGGACTCAGTTAGGTGTGCCCAGACGCACTG ACACATTCTGTGTAAGAGCCCCACTGAGGGCTCTGCAGCGGAGTGACAGCAACCCCAAAGATGAGGCACCAGAGA

MGSQEVLGHAARLASSGLLLQVLFRLITFVLNAFILRFLSKEIVGVVNVRLTLLYSTTLFLAREAFRRACLSGGT
QRDWSQTLNLLWLTVPLGVFWSLFLGWIWLQLLEVPDPNVVPHYATGVVLFGLSAVVELLGEPFWVLAQAHMFVK
LKVIAESLSVILKSVLTAFLVLWLPHWGLYIFSLAQLFYTTVLVLCYVIYFTKLLGSPESTKLQTLPVSRITDLL
PNITRNGAFINWKEAKLTWSFFKQSFLKQILTEGERYVMTFLNVLNFGDQGVYDIVNNLGSLVARLIFQPIEESF
YIFFAKVLERGKDATLQKQEDVAVAAAVLESLLKLALLAGLTITVFGFAYSQLALDIYGGTMLSSGSGPVLLRSY
CLYVLLLAINGVTECFTFAAMSKEEVDRYNFVMLALSSSFLVLSYLLTRWCGSVGFILANCFNMGIRITQSLCFI
HRYYRRSPHRPLAGLHLSPVLLGTFALSGGVTAVSEVFLCCEQGWPARLAHIAVGAFCLGATLGTAFLTETKLIH
FLRTQLGVPRRTDKMT

TCCATCCAGGCCACCACTGCGGCGGGCTCTGGCCACCCCACGTCATGCTGCAGCGCCGCAGAGATCATGGCTGTC CTCTTTTTCCACACCATGCGCTACAAGTCCCAGGACCCCCGGAATCCGCACAATGACCGCTTTGTGCTCTCCAAG GGCCATGCAGCTCCCATCCTCTACGCGGTCTGGGCTGAAGCTGGTTTCCTGGCCGAGGCGGAGCTGCTGAACCTG AGGAAGATCAGCTCCGACTTGGACGGGCACCCGGTCCCGAAACAAGCTTTCACCGACGTGGCCACTGGCTCCCTG GGCCAGGGCCTCGGGGCCGCTTGTGGGATGGCCTACACCGGCAAATACTTCGACAAGGCCAGCTACCGAGTCTAT TGCTTGCTGGGAGACGGGGAGCTGTCAGAGGGCTCTGTATGGGAGGCCATGGCCTTCGCCAGCATCTATAAGCTG GACAACCTCGTGGCCATTCTAGACATCAATCGCCTGGGCCAGAGTGACCCGGCCCCTCTGCAGCACCAGATGGAC GTAGAAGATAAGGAGTCTTGGCATGGGAAGCCCCTCCCCAAAAACATGGCTGAGCAGATCATCCAGGAGATCTAC GCCAAGCTGGGCCATGCCAGTGACCGCATCATCGCCCTGGATGGGGACACCAAAAATTCCACCTTCTCGGAGATC TTCAAAAAGGAGCACCCGGACCGCTTCATCGAGTGCTACATTGCTGAGCAGAACATGGTGAGCATCGCGGTGGGC TGTGCCACCGCAACAGGACGGTGCCCTTCTGCAGCACTTTTGCAGCCTTCTTCACGCGGGCCTTTGACCAGATT $\tt CGCATGGCCGCCATCTCCGAGAGCAACATTAACCTCTGCGGCTCCCACTGCGGCGTTTCCATCGGGGAAGACGGG$ CCCTCCCAGATGGCCCTAGAAGATCTGGCTATGTTTCGGTCAGTCCCCACATCAACTGTCTTTTACCCCAAGTGAT GGCGTTGCTACAGAGAAGGCAGTGGAACTAGCCGCCAATACAAAGGGTATCTGCTTCATCCGGACCAGCCGCCCA GAAAATGCCATCATCTATAACAACAATGAGGACTTCCAGGTCGGACAAGCCAAGGTGGTCCTGAAGAGCAAGGAT AAGATCAACATCCGCGTGCTGGACCCCTTCACCATCAAGCCCCTGGACAGAAAACTCATTCTCGACAGCGCTCGT GCCACCAAGGGCAGGATCCTCACCGTGGAGGACCATTATTATGAAGGTGGCATTGGTGAGGCTGTGTCCAGTGCA GTAGTGGGCGAGCCTGGCATCACCTGTCACCCACCTGGCAGTTAACCGGGTACCAAGAAGTGGGAAGCCGGCTGAG $\tt CTGCTGAAGATGTTTGGTATCGACAGGGATGCCATTGCACAAGCTGTGAGGGGCCTCATCACCAAGGCC\underline{TAG}_{\tt GGC}$ GGGTATGAAGTGTGGGGGGGGGGTCTATACATTCCTGAGATTCTGGGAAAGGTGCTCAAAGATGTACTGAGAGGA AAAAAAAAAAA

MESYHKPDQQKLQALKDTANRLRISSIQATTAAGSGHPTSCCSAAEIMAVLFFHTMRYKSQDPRNPHNDRFVLSK GHAAPILYAVWAEAGFLAEAELLNLRKISSDLDGHPVPKQAFTDVATGSLGQGLGAACGMAYTGKYFDKASYRVY CLLGDGELSEGSVWEAMAFASIYKLDNLVAILDINRLGQSDPAPLQHQMDIYQKRCEAFGWHAIIVDGHSVEELC KAFGQAKHQPTAIIAKTFKGRGITGVEDKESWHGKPLPKNMAEQIIQEIYSQIQSKKKILATPPQEDAPSVDIAN IRMPSLPSYKVGDKIATRKAYGQALAKLGHASDRIIALDGDTKNSTFSEIFKKEHPDRFIECYIAEQNMVSIAVG CATRNRTVPFCSTFAAFFTRAFDQIRMAAISESNINLCGSHCGVSIGEDGPSQMALEDLAMFRSVPTSTVFYPSD GVATEKAVELAANTKGICFIRTSRPENAIIYNNNEDFQVGQAKVVLKSKDDQVTVIGAGVTLHEALAAAELLKKE KINIRVLDPFTIKPLDRKLILDSARATKGRILTVEDHYYEGGIGEAVSSAVVGEPGITVTHLAVNRVPRSGKPAE LLKMFGIDRDAIAQAVRGLITKA

AGAAGCCTCCTGGCAGACACTGGAGCCACGATGAAGCCCCCCAAGGCCTGTCCGTACCTGCAGCAAAGTTCTCGTC CTGCTTTCACTGCTGGCCATCCACCAGACTACTACTGCCGAAAAGAATGGCATCGACATCTACAGCCTCACCGTG GACTCCAGGGTCTCATCCCGATTTGCCCACACGGTCGTCACCAGCCGAGTGGTCAATAGGGCCAATACTGTGCAG GAGGCCACCTTCCAGATGGAGCTGCCCAAGAAAGCCTTCATCACCAACTTCTCCATGATCATCGATGGCATGACC GGCCTCGTCAAGGCCACCGGGAGAAACATGGAGCAGTTCCAGGTGTCGGTCAGTGTGGCTCCCAATGCCAAGATC ACCTTTGAGCTGGTCTATGAGGAGCTGCTCAAGCGGCGTTTTGGGGGTGTACGAGCTGCTGCAAAGTGCGGCCC ${\tt CAGCAGCTGGTCAAGCACCTGCAGATGGACATTCACATCTTCGAGCCCCAGGGCATCAGCTTTCTGGAGACAGAG}$ AGCACCTTCATGACCAACCAGCTGGTAGACGCCCTCACCACCTGGCAGAATAAGACCAAGGCTCACATCCGGTTC AAGCCAACACTTTCCCAGCAGCAAAAGTCCCCAGAGCAGCAAGAAACAGTCCTGGACGGCAACCTCATTATCCGC TATGATGTGGACCGGGCCATCTCCGGGGGCTCCATTCAGATCGAGAACGGCTACTTTGTACACTACTTTGCCCCC GAGGGCCTAACCACAATGCCCAAGAATGTGGTCTTTGTCATTGACAAGAGCGGCTCCATGAGTGGCAGGAAAATC CAGCAGACCCGGGAAGCCCTAATCAAGATCCTGGATGACCTCAGCCCCAGAGACCAGTTCAACCTCATCGTCTTC AGTACAGAAGCAACTCAGTGGAGGCCATCACTGGTGCCAGCCTCAGCCGAGAACGTGAACAAGGCCAGGAGCTTT GCTGCGGGCATCCAGGCCCTGGGAGGGACCAACATCAATGATGCAATGCTGATGGCTGTGCAGTTGCTGGACAGC GGGGAGACTAACCCCAGGAGCATCCAGAATAACGTGCGGGAAGCTGTAAGTGGCCGGTACAGCCTCTTCTGCCTG GGCTTCGGTTTCGACGTCAGCTATGCCTTCCTGGAGAAGCTGGCACTGGACAATGGCGGCCTGGCCCGGCGCATC CATGAGGACTCAGACTCTGCCCTGCAGCTCCAGGACTTCTACCAGGAAGTGGCCAACCCACTGCTGACAGCAGTG ACCTTCGAGTACCCAAGCAATGCCGTGGAGGAGGTCACTCAGAACAACTTCCGGCTCCTCTTCAAGGGCTCAGAG CACAACTTCATGGAGAGGCTCTGGGCATACCTGACTATCCAGCAGCTGCTGGAGCAAACTGTCTCCGCATCCGAT GCTGATCAGCAGGCCCTCCGGAACCAAGCGCTGAATTTATCACTTGCCTACAGCTTTGTCACGCCTCTCACATCT ATGGTAGTCACCAAACCCGATGACCAAGAGCAGTCTCAAGTTGCTGAGAAGCCCCATGGAAGGCGAAAGTAGAAAC AGGAATGTCCACTCAGGTTCCACTTTCTTCAAATATTATCTCCAGGGAGCAAAAATACCAAAACCAGAGGCTTCC TTTTCTCCAAGAAGAGGATGGAATAGACAAGCTGGAGCTGCTGGCTCCCGGATGAATTTCAGACCTGGGGTTCTC AGCTCCAGGCAACTTGGACTCCCAGGACCTCCTGATGTTCCTGACCATGCTGCTTACCACCCCTTCCGCCGTCTG GCCATCTTGCCTGCTTCAGCACCACCAGCCACCTCAAATCCTGATCCAGCTGTGTCTCGTGTCATGAATATGAAA ATCGAAGAACCACCATGACAACCCAAACCCCAGCCCCATACAGGCTCCCTCTGCCATCCTGCCACTGCCTGGG CAGAGTGTGGAGCGCTCTGTGTGGACCCCAGACACCGCCAGGGGCCAGTGAACCTGCTCTCAGACCCTGAGCAA GGGGTTGAGGTGACTGGCCAGTATGAGAGGGAGAAGGCTGGGTTCTCATGGATCGAAGTGACCTTCAAGAACCCC CTGGTATGGGTTCACGCATCCCCTGAACACGTGGTGGTGACTCGGAACCGAAGAAGCTCTGCGTACAAGTGGAAG GAGACGCTATTCTCAGTGATGCCCGGCCTGAAGATGACCATGGACAAGACGGGTCTCCTGCTGCTCAGTGACCCA GACAAAGTGACCATCGGCCTGTTGTTCTGGGATGGCCGTGGGGAGGGGCTCCGGCTCCTTCTGCGTGACACTGAC CGCTTCTCCAGCCACGTTGGAGGGACCCTTGGCCAGTTTTACCAGGAGGTGCTCTGGGGGATCTCCAGCAGCATCA GATGACGGCAGACGCACGCTGAGGGTTCAGGGCAATGACCACTCTGCCACCAGAGAGCGCAGGCTGGATTACCAG GAGGGGCCCCGGGAGTGGAGATTTCCTGCTGGTCTGTGGAGCTGTAGTTCTGATGGAAGGAGCTGTGCCCACCC TGTACACTTGGCTTCCCCCTGCAACTGCAGGGCCGCTTCTGGGGGCCTGGACCACCATGGGGAGGAAGAGTCCCAC TCATTACAAATAAAGAAAGGTGGTGTGAGCCTGGG

GCGGCAGCGTAAGTGCGTGACGCTCGTCAGTGGCTTCAGTTCACACGTGGCGCCAGCGGAGGCAGGTTGATGTGT GGTATAAAATCCAAAAAAAGGTTCGAGAACATCATCGAAAATTAAGAAAGGAGGCTAAAAAAGCGGGGTCACAAGA AGCCTAGGAAAGACCCAGGAGTTCCAAACAGTGCTCCCTTTAAGGAGGCTCTTCTTAGGGAAGCTGAGCTAAGGA AACAGAGGCTTGAAGAACTAAAACAGCAGCAGAAACTTGACAGGCAGAAGGAACTAGAAAAGAAAAGAAAACTTG AAACTAATCCTGATATTAAGCCATCAAATGTGGAACCTATGGAAAAGGAGTTTGGGCTTTGCAAAACTGAGAACA AAGCCAAGTCGGGCAAACAGAATTCAAAGAAGCTGTACTGCCAAGAACTTAAAAAGGTGATTGAAGCCTCCGATG TTGTCCTAGAGGTGTTGGATGCCAGAGATCCTCTTGGTTGCAGATGTCCTCAGGTAGAAGAGGCCATTGTCCAGA GTGGACAGAAAAGCTGGTACTTATATTAAATAAATCAGATCTGGTACCAAAGGAGAATTTGGAGAGCTGGCTAA ATTATTTGAAGAAAGAATTGCCAACAGTGGTGTTCAGAGCCTCAACAAAACCAAAGGATAAAGGGAAGATAACCA AGCGTGTGAAGGCAAAGAAGAATGCTGCTCCATTCAGAAGTGAAGTCTGCTTTGGGAAAGAGGGCCTTTGGAAAC TTCTTGGAGGTTTTCAGGAAACTTGCAGCAAAGCCATTCGGGTTGGAGTAATTGGTTTCCCAAATGTGGGGAAAA GCAGCATTATCAATAGCTTAAAACAAGAACAGATGTGTAATGTTGGTGTATCCATGGGGGCTTACAAGGAGCATGC CTGCGCTTGCTCTGCGAAGTCCAGCAAGTATTGAAGTAGTAAAACCGATGGAGGCTGCCAGTGCCATCCTTTCCC AGGCTGATGCTCGACAGGTAGTACTGAAATATACTGTCCCAGGCTACAGGAATTCTCTGGAATTTTTTACTGTGC TTGCTCAGAGAAGAGGTATGCACCAAAAAGGTGGAATCCCAAATGTTGAAGGTGCTGCCAAACTGCTGTGGTCTG AGTGGACAGGTGCCTCATTAGCTTACTATTGCCATCCCCCTACATCTTGGACTCCTCCTCCATATTTTAATGAGA GTATTGTGGTAGACATGAAAAGCGGCTTCAATCTGGAAGAACTGGAAAAGAACAATGCACAGAGCATAAGAGCCA TCAAGGGCCCTCATTTGGCCAATAGCATCCTTTTCCAGTCTTCCGGTCTGACAAATGGAATAATAGAAGAAAAGG AAACTGTTGATGAAGAAGTTGATGAAAACAGCTCAGGCATGTTTGCTGCAGAAGAGACAGGGGGAGGCACTGTCTG AGGAGACTACAGCAGGTGAACAGTCTACAAGGTCTTTTATCTTGGATAAAATCATTGAAGAGGATGATGCTTATG AACTGTTCTCTGTATAAGTTATGGTATGCATGAGCTGTGTAAATTTTGTGAATATGTATTATATAAAACCAGGC AACTTGGAATCCCTAAATTCTGTAAAAAGACAATTCATCTCATTGTGAGTGGAAGTAGTTATCTGGAATAAAAA **AGAAGATACCTATTG**

FIGURE 1163A

TGCCTGGCAGGCTTCAGCTTCGTCAGGGGGCAGGTGCTGTTCAAAGGCTGTGATGTGAAAACCACGTTTGTCACT CAGATAACCCAGGACTGCCGCTACGAAGTACAGCTGGGGGGCTCTATGGTGTCCATGAGCGGCTGCAGACGGAAG TGCCGGAAGCAAGTGGTGCAGAAGGCCTGCTGCCCTGGCTACTGGGGTTCCCGGTGCCATGAATGCCCTGGGGGC AACTTCCGCGGCTCAGCCTGCCAGGAGTGCCAAGACCCCAACCGGTTCGGGCCTGACTGCCAATCGGTGTGCAGC TGTGTGCACGGAGTGTGCAACCATGGGCCACGTGGGGATGGAAGCTGCCTGTGCTTTGCTGGATACACTGGCCCC CACTGTGATCAAGAGCTGCCCGTCTGCCAGGAGCTGCCCCAGAACACCCCAGTGCTCCCCAGAGGCTCCC AGCTGCAGGTGCCTGCCCGGCTACACACAGCAGGGCAGTGAATGCCGAGCCCCCAACCCCTGCTGGCCATCACCC TGCTCACTGCTGGCCCAGTGCTCGGTGAGCCCCAAGGGGCAGGCTCAGTGTCACTGCCCTGAGAACTACCATGGC GATGGGATGGTGTCTGCCCAAGGACCCATGCACTGACAACCTTGGTGGCTGCCCCAGCAACTCTACTTTGTGT GTGTACCAGAAGCCGGGCCAGGCCTTCTGCACCTGCCGGCCAGGCCTGGTCAGCATCAACAGCAACGCTTCTGCG GGCTGCTTCGCCTTCTCCCTCCCGACCGGTCTGCCACTTGCCAGGTGACCGCTGATGGGAAGACC GCCACGCAGACAGGCCGGGTGTTCCTGCAGCTGAGGGTCGCCGTGGCCATGATGGACCAGGGCTGCCGGGAAATC CGAAGGTGGTGGACGCTGGCCGGGCAGGAGATCACCGTCACCTTTAACCAATTCACGAAATACTCCTACAAGTAC AAAGACCAGCCCAGCAGACGTTCAACATCTACAAGGCCAACAACATAGCAGCTAATGGCGTCTTCCACGTGGTC ACTGGCCTGCGGTGGCAGGCCCCTCTGGGACCCCTGGGGATCCCAAGAGAACTATCGGACAGATCCTCGCCTCT TTCACAGTCTTTGCCCCAAGCAATGAGGCTGTGGACAGCTTGCGTGACGGCCGCCTGATCTACCTCTTCACAGCG GGTCTCTCTAAACTGCAGGAGTTGGTGCGGTACCACATCTACAACCACGGCCAGCTGACCGTTGAGAAGCTCATC TCCAAGGGTCGGATCCTCACCATGGCGAACCAGGTCCTGGCTGTGAACATTTCTGAGGAGGGGGCGCATCCTGCTG GGACCCGAGGGGGTCCCGCTGCAGAGGGTAGACGTGATGGCCGCCAATGGTGATCCACATGCTGGACGGCATC CTGCTGCCCCGACCATCCTGCCCAAGCACTGCAGCAGGAGCAGCACAAGATTGTGGCGGGCTCC TGTGTGGACTGCCAAGCCCTGAACACCAGCACGTGTCCCCCCAACAGTGTGAAGCTGGACATCTTCCCCAAGGAG TGTGTCTACATCCATGACCCAACGGGGCTCAATGTGCTAAAGAAGGGCTGTGCCAGCTACTGCAACCAAACCATC ATGGAACAAGGCTGCTGCAAAGGTTTTTTCGGGCCTGACTGCACGCAGTGTCCTGGGGGGCTTCTCCAACCCCTGC GCCTGCCACATCTGCTCGAACCCAAACAAGCATGGAGAGCAATGCCAGGAAGACTGCGGCTGTGTCCATGGTCTC TGCGACAACCGCCCAGGCAGTGGGGGGGTGTGCCAGCAGGGCACGTGTGCCCCTGGCTTCAGTGGCCGGTTCTGC GAGGGTGTTGCCAGATGTCGCTGTCTTGATGGCTTTGAGGGTGATGGCTTCTCCTGCACACCTAGCAACCCCTGC TGCCACAAAGGCTGGAGTGGGGATGGCCGCGTCTGTGTGGCTATTGACGAGTGTGAGCTGGACATGAGAGGTGGC TGCCACACCGATGCCCTCTGCAGCTATGTGGGCCCCGGGCAGAGCCGATGCACCTGCAAGCTGGGCTTTGCCGGG GCAGTGGGGGGAGGTCAGCGGGTCTGCACGTGCCCCCTGGCTTTGGGGGTGATGGCTTCAGCTGTTATGGAGAC ${\tt ATCTTCCGGGAGCTGGAGGCAAATGCCCACTTCTCCATCTTCTACCAATGGCTTAAGAGTGCCGGCATCACGCTT}$ $\tt CCTGCCGACCGCCGAGTCACAGCCCTGGTGCCCTCCGAGGCTGCAGTCCGTCAGCTGAGCCCCGAGGACCGAGCT$ TTCTGGCTGCAGCCAAGGACGCTGCCGAACCTGGTCAGGGCCCATTTTCTCCAGGGTGCCCTCTTCGAGGAGGAG $\tt CTGGCCCGGCTGGGTGGCCAGGAGTGGCCACCCTGAACCCCACCACACGCTGGGAGATTCGCAACATTAGTGGG$ AGGGTCTGGGTGCAGAATGCCAGCGTGGATGTGGCTGACCTCCTTGCCACCAACGGTGTCCTACACATCCTCAGC ${\tt TTCAGCCTCTTCCGGGAATTGCTGCAGCACCATGGGTTGGTGCCCCAGATTGAGGCTGCCACTGCCTACACCATC}$ TTTGTGCCCACCAACCGCTCCCTGGAGGCCCAGGGCAACAGCAGTCACCTGGACGCAGACACAGTGCGGCACCAT

FIGURE 1163B

CACTGGATCGTCTTCTACAACCACAGTGGCCAGCCTGAGGTGAACCATGTGCCACTGGAAGGCCCCATGCTGGAG GAGGCCCTGCGGGAGAAATGTGTAAACTGCACCAGGAGATTCCGCTGCACTCAGGGCTTCCAGCTGCAGGACACA CCCAGGAAGAGCTGTGTCTACCGATCTGGCTTCTCCCTGGGGGCTGCTCTTACACATGTGCCAAGAAGATC TCAGGCCATGGGCAGTGCCAGGACAGGTTCCTGGGCAGCGGGGAGTGCCACTGCCACGAGGGCTTCCATGGAACG GCCTGTGAGGTGTGTGAGCTGGGCCGCTACGGGCCCAACTGCACCGGAGTGTGTGACTGTGCCCATGGGCTGTGC CAGGAGGGCTGCAAGGGGACGGAAGCTGTGTCTGTAACGTGGGCTGGCAGGGCCTCCGCTGTGACCAGAAAATC GCCTGTGCTGCGGGATACTCCGGCAATGGCATCTTCTGTTCAGAGGTGGACCCCTGCGCCCACGGCCATGGGGGC TGCTCCCCTCATGCCAACTGTACCAAGGTGGCACCTGGGCAGGACATGCACCTGCCAGGATGGCTACATGGGC GACGGGGAGCTGTGCCAGGAAATTAACAGCTGTCTCATCCACCACGGGGGCTGCCACATTCACGCCGAGTGCATC CTGGACCCCTGCTCTAAGAACAATGGAGGATGCAGCCCATATGCCACCTGCAAAAGCACAGGGGATGGCCAGAGG ACATGTACCTGCGACACAGCCCACACCGTGGGGGACGCCTCACCTGCCGTGCCCGAGTCGGCCTGGAGCTCCTG ${\tt AGGGATAAGCATGCCTCATTCTTCAGCCTCCGCCTCCTGGAATATAAGGAGCTCAAGGGCGATGGGCCTTTCACC}$ AGCAGCGACCATGAGGCCGTGAACGGCATCCTGCACTTCATTGACCGTGTCCTGCCCCCCGAGGCGCTGCAC TGGGAGCCTGATGATGCTCCCATCCCGAGGAGAAATGTCACCGCCGCCGCCCAGGGCTTCGGTTACAAGATCTTC AGCGGCCTCCTGAAGGTGGCCGGCCTCCTGCCCCTGCTTCGAGAGGCATCCCATAGGCCCTTCACAATGCTGTGG CCCACAGACGCCGCCTTTCGAGCTCTGCCTCCGGATCGCCAGGCCTGGCTGTACCATGAGGACCACCGTGACAAG GATGATGCTCGCATTGTGCAGCGGCACTTGCCCTTTGAGGGTGGCCTGGCCTATGGCATCGACCAGCTGCTGGAG CCACCTGGCCTTGGTGCTCGCTGTGACCACTTTGAGACCCGGCCCCTGCGACTGAACACCTGCAGCATCTGTGGG $\tt CTGGAGCCACCCTGTCCTGAGGGGTCACAGGAGCAGGGCAGCCCTGAGGCCTGCTGGCGCTTCTACCCGAAGTTC$ TGGACGTCCCCTCCGCTGCACTCTTTGGGATTACGCAGCGTCTGGGTCCACCCCAGCCTTTGGGGTAGGCCCCAA GGCCTGGGCAGGGGCTGCCACCGCAATTGTGTCACCACCTGGAAGCCCAGCTGCTGCCCTGGTCACTATGGC AGTGAGTGCCAAGCTTGCCCTGGCGGCCCCAGCAGCCCTTGTAGTGACCGTGGCGTGTGCATGGACGGCATGAGT GGCAGTGGGCAGTGTCTGTGCCGTTCAGGTTTTGCTGGGACAGCCTGTGAACTCTGTGCTCCTGGTGCCTTTTGGG CCCCATTGTCAAGCCTGCCGCTGCACTGTGCATGGCCGCTGTGATGAGGGCCTTGGGGGGCTCTGGCTTC TGTGATGAAGGCTGGACTGGGCCACGCTGTGAGGTGCAACTGGAGCTGCAGCCTGTGTGTACCCCACCCTGTGCA GTGGCAGACCTGTGCCAGGACGGGCATGGTGGCTGCAGTGAGCACGCCAACTGTAGCCAGGTAGGAACAATGGTC ACTTGTACCTGCCCGACTACGAGGGTGATGGCTGGAGCTGCCGGGCCCGCAACCCCTGCACAGATGGCCAC CGCGGGGGCTGCAGCGAGCACGCCAACTGCTTGAGCACCGGCCTGAACACACGGCGCTGTGAGTGCCACGCAGGC TGCCACTCAGATGCCATGTGCACTGACCTGCACTTCCAGGAGAAACGGGCTGGCGTTTTCCACCTCCAGGCCACC AGCGGCCCTTATGGTCTGAACTTTTCGGAGGCTGAGGCGGCATGCGAAGCACAGGGAGCCGTCCTTGCTTCATTC ${\tt CCTCAGCTCTGCCCCAGCAGCTGGGCTTCCACCTGTGCCTCATGGGCTGGCCAATGGCTCCACTGCC}$ CTCTCAGAACGCTGGGATGCCTACTGCTTCCGTGTGCAAGATGTGGCCTGCCGATGCCGAAATGGCTTCGTGGGT ATGCTATTGGGCTATGCCAATGCCACCCAGCGGGGTCTCGACTTCCTGGACTTCCTGGATGATGAGCTCACGTAT ${\tt AAGACACTCTTCGTCCCTGTCAATGAAGGCTTTGTGGACAACATGACGCTGAGTGGCCCAGACTTGGAGCTGCAT}$

FIGURE 1163C

MAGPRGLLPLCLLAFCLAGFSFVRGQVLFKGCDVKTTFVTHVPCTSCAAIKKQTCPSGWLRELPDQITQDCRYEV QLGGSMVSMSGCRRKCRKQVVQKACCPGYWGSRCHECPGGAETPCNGHGTCLDGMDRNGTCVCQENFRGSACQEC QDPNRFGPDCQSVCSCVHGVCNHGPRGDGSCLCFAGYTGPHCDQELPVCQELRCPQNTQCSAEAPSCRCLPGYTQ QGSECRAPNPCWPSPCSLLAQCSVSPKGQAQCHCPENYHGDGMVCLPKDPCTDNLGGCPSNSTLCVYQKPGQAFC ${\tt TCRPGLVSINSNASAGCFAFCSPFSCDRSATCQVTADGKTSCVCRESEVGDGRACYGHLLHEVQKATQTGRVFLQ}$ ITVTFNQFTKYSYKYKDQPQQTFNIYKANNIAANGVFHVVTGLRWQAPSGTPGDPKRTIGQILASTEAFSRFETI LENCGLPSILDGPGPFTVFAPSNEAVDSLRDGRLIYLFTAGLSKLQELVRYHIYNHGQLTVEKLISKGRILTMAN QVLAVNISEEGRILLGPEGVPLQRVDVMAANGVIHMLDGILLPPTILPILPKHCSEEQHKIVAGSCVDCQALNTS TCPPNSVKLDIFPKECVYIHDPTGLNVLKKGCASYCNQTIMEQGCCKGFFGPDCTQCPGGFSNPCYGKGNCSDGI QGNGACLCFPDYKGIACHICSNPNKHGEQCQEDCGCVHGLCDNRPGSGGVCQQGTCAPGFSGRFCNESMGDCGPT GLAQHCHLHARCVSQEGVARCRCLDGFEGDGFSCTPSNPCSHPDRGGCSENAECVPGSLGTHHCTCHKGWSGDGR VCVAIDECELDMRGGCHTDALCSYVGPGQSRCTCKLGFAGDGYQCSPIDPCRAGNGGCHGLATCRAVGGGQRVCT CPPGFGGDGFSCYGDIFRELEANAHFSIFYQWLKSAGITLPADRRVTALVPSEAAVRQLSPEDRAFWLQPRTLPN LVRAHFLQGALFEEELARLGGQEVATLNPTTRWEIRNISGRVWVQNASVDVADLLATNGVLHILSQVLLPPRGDV PGGQGLLQQLDLVPAFSLFRELLQHHGLVPQIEAATAYTIFVPTNRSLEAQGNSSHLDADTVRHHVVLGEALSME TLRKGGHRNSLLGPAHWIVFYNHSGQPEVNHVPLEGPMLEAPGRSLIGLSGVLTVGSSRCLHSHAEALREKCVNC TRRFRCTQGFQLQDTPRKSCVYRSGFSFSRGCSYTCAKKIQVPDCCPGFFGTLCEPCPGGLGGVCSGHGQCQDRF PNANCVQDSAGASTCACAAGYSGNG1FCSEVDPCAHGHGGCSPHANCTKVAPGQRTCTCQDGYMGDGELCQEINS CLIHHGGCHIHAECIPTGPQQVSCSCREGYSGDGIRTCELLDPCSKNNGGCSPYATCKSTGDGQRTCTCDTAHTV GDGLTCRARVGLELLRDKHASFFSLRLLEYKELKGDGPFTIFVPHADLMSNLSQDELARIRAHRQLVFRYHVVGC $\mathtt{RRLRSEDLLEQGYATALSGHPLRFSEREGSIYLNDFARVVSSDHEAVNGILHFIDRVLLPPEALHWEPDDAPIPR}$ ${ t RNVTAAAQGFGYKIFSGLLKVAGLLPLLREASHRPFTMLWPTDAAFRALPPDRQAWLYHEDHRDKLAAILRGHMI}$ ${\tt RNVEALASDLPNLGPLRTMHGTPISFSCSRTRAGELMVGEDDARIVQRHLPFEGGLAYGIDQLLEPPGLGARCDHAMMER} \\$ FETRPLRLNTCSICGLEPPCPEGSQEQGSPEACWRFYPKFWTSPPLHSLGLRSVWVHPSLWGRPQGLGRGCHRNC VTTTWKPSCCPGHYGSECQACPGGPSSPCSDRGVCMDGMSGSGQCLCRSGFAGTACELCAPGAFGPHCQACRCTV HGRCDEGLGGSGSCFCDEGWTGPRCEVQLELQPVCTPPCAPEAVCRAGNSCECSLGYEGDGRVCTVADLCQDGHG GCSEHANCSQVGTMVTCTCLPDYEGDGWSCRARNPCTDGHRGGCSEHANCLSTGLNTRRCECHAGYVGDGLQCLE ESEPPVDRCLGQPPPCHSDAMCTDLHFQEKRAGVFHLQATSGPYGLNFSEAEAACEAQGAVLASFPQLSAAQQLG FHLCLMGWLANGSTAHPVVFPVADCGNGRVGIVSLGARKNLSERWDAYCFRVQDVACRCRNGFVGDGISTCNGKL ${ t LDVLAATANFSTFYGMLLGYANATQRGLDFLDFLDDELTYKTLFVPVNEGFVDNMTLSGPDLELHASNATLLSAN$ ASQGKLLPAHSGLSLIISDAGPDNSSWAPVAPGTVVVSRIIVWDIMAFNGIIHALASPLLAPPQPQAVLAPEAPP ${\tt VAAGVGAVLAAGALLGLVAGALYLRARGKPMGFGFSAFQAEDDADDDFSPWQEGTNPTLVSVPNPVFGSDTFCEP}$ FDDSLLEEDFPDTQRILTVK

1253/6881 FIGURE 1165A

AGGAAGCGCGCGTCGTGGGCTCGGAGCTTGTGGACACTTATACGGTTTACATCATCCAGGTCACTGATGGCAGCC ATGAGTGGACAGTAAAGCACCGCTACAGCGACTTCCATGACCTGCATGAAAAGCTCGTTGCAGAGAGAAAGATTG ATAAAAACCTGCTTCCGCCCAAAAAGATAATTGGGAAAAACTCAAGAAGCTTGGTGGAGAAGAGGGAGAAGATC TGGAGGTCTACCTCCAGAAGCTCCTGGCTGCCTTCCCTGGCGTGACCCCCAGAGTACTGGCCCACTTCTTGCATT TTCACTTCTATGAGATAAATGGCATCACCGCGGCACTGGCTGAAGAGCTCTTTGAGAAAGGAGAACAGCTCCTGG GGGCCGGCGAGGTCTTTGCCATTGGACCCCTGCAGCTGTATGCCGTCACGGAGCAGCTGCAGCAGGGAAAGCCCA TTTCTGGCACAGAAGGACCTTTTGGGACCAGCAACATTCAGGAGCAGCTCCTGCCGTTCGACCTATCAATATTCA ${\tt AGTCCCTGCATCAGGTGGAGATAAGTCACTGTGATGCTAAGCACATCAGAGGGCTGGTCGCATCGAAGCCCACCT}$ TGAGTCACAATGGATTGCTGGTTGTGGACAATCTGCAGCACCTGTATAACCTTGTGCATCTGGACCTGTCCTACA TAGAGAGTCTGAGTGGCCTGCACAAGCTCTACTCACTGGTCAACCTGGATCTCCGGGACAACAGGATCGAACAGA ${\tt TGGAGGAGGTCCGGAGCATAGGCAGCCTCCCGTGTCTGGAGCACGTGTCTCTGCTGAACAACCCTCTGAGCATCA}$ $\tt CCACAGAGAGGAGCTGGACACTGTGGAAGTGCTGAAAGCAATTCAGAAAGCCAAGGAGGTCAAGTCCAAACTGA$ GCAACCCAGAGAAGAAGGGTGGTGAAGACTCCCGGCTCTCAGCTGCCCCCTGCATCAGACCCAGCAGCTCCCCTC AGGCCCTGGCCAGCAGCCTCTCGTCCACTGACAGTCTGACTCCCGAGCACCAGCCCATTGCCCAGGGATGTTCTG ATTCCTTGGAGTCCATCCCTGCGGGACAGGCAGCTTCCGATGATTTAAGGGACGTGCCAGGAGCTGTTGGTGGTG ${\tt CAAGCCCAGAACATGCCGAGCCGGAGGTCCAGGTGGTGCCGGGGTCTGGCCAGATCATCTTCCTGCCCTTCACCT}$ GCATTGGCTACACGGCCACCAATCAGGACTTCATCCAGCGCCTGAGCACACTGATCCGGCAGGCCATCGAGCGGC AGCTGCCTGCCTGGATCGAGGCTGCCAACCAGCGGGAGGAGGAGGGCCAGGGTGAACAGGGCGAGGAGGATGAGG AGGAGGAAGAAGAGGAGGACGTGGCTGAGAACCGCTACTTTGAAATGGGGCCCCCAGACGTGGAGGAGGAGGAGG ${\tt GGGCCCTGGGCGGACGAGGACTTCCTGCTGGAGCACATCCGCATCCTCAAGGTGCTGTGGTGCTTCCTGATCC}$ TCATTATCTCGGACGCCGACCTGCACGAGTTCCACGCGGACCTGCGCTCATGCTTTGCACCCCAGCACATGG ${\tt CCATGCTGTGTAGCCCCATCCTCTACGGCAGCCACCCAGCCTGCAGGAGTTCCTGCGCCAGCTGCTCACCTTCT}$ ACAAGGTGGCTGGCGGCTGCCAGGAGCGCAGCCAGGGCTGCTTCCCCGTCTACCTGGTCTACAGTGACAAGCGCA GCTCCTGCTGCGCCCCTCTGAGGCCGTCAAGTCCGCCGCCATCCCCTACTGGCTGTTGCTCACGCCCCAGCACC TCAACGTCATCAAGGCCGACTTCAACCCCATGCCCAACCGTGGCACCCACAACTGTCGCAACCGCAACAGCTTCA AGCTCAGCCGTGTGCCGCTCTCCACCGTGCTGCTGGACCCCACACGCAGCTGTACCCAGCCTCGGGGCGCCTTTG $\tt CTGATGGCCACGTGCTAGAGCTGCTCGTGGGGTACCGCTTTGTCACTGCCATCTTCGTGCTGCCCACGAGAAGT$ GTCCCCAGGAGGTCCCAGCAGAGGCTCTGGCCCCCGGCCCCAGTGGAAGTCCCAGCTCCAGCCCCTGCAGCAGCCT TGGAAGCTCCAGCCCACCCCCAGCCGAGGCCCCTGCCCAGTACCCGAGTGAGCACCTCATCCAGGCCACCTCGG AGGAGAATCAGATCCCCTCGCACTTGCCTGCCTGCCCGTCGCTCCGCCACCTCGCCAGCCTGCGGGGCAGCGCCA TCATCGAGCTCTTCCACAGCAGCATTGCTGAGGTTGAAAACGAGGAGCTGAGGCACCTCATGTGGTCCTCGGTGG TGTTCTACCAGACCCCAGGGCTGGAGGTGACTGCCTGCGTGCTCCCCCCAAGGCTGTGTACTTTGTGCTCC

1254/6881 FIGURE 1165B

ACGACGGCCTCCGCCGCTACTTCTCAGAGCCACTGCAGGATTTCTGGCATCAGAAAAACACCGACTACAACAACA AGCATTTCCGGCTGACGGGTTCCACCCCGATGCAGGTGGTCACGTGCTTGACGCGGGACAGCTACCTGACGCACT TCTACTCCGAGTTTGGGAACAAGACCACAGGGAAGATGGAGAACTACGAGCTGATCCACTCTAGTCGCGTCAAGT CCCTGCGCCCCAAGACACTCCTGCTCACCAGCTCCGAGATCTTCCTCCTGGATGAGGACTGTGTCCACTACCCAC TGCCCGAGTTTGCCAAAGAGCCGCCGCAGAGAGACAGGTACCGGCTGGACGATGGCCGCCGCGTCCGGGACCTGG ACCGAGTGCTCATGGGCTACCAGACCTACCCGCAGGCCCTCACCCTCGTCTTCGATGACGTGCAAGGTCATGACC TCCAGTGGCAGGTGTTTGTCCCCAGTGCTGAGAGCAGAGAAGCTCATCTCGCTGTTGGCTCGCCAGTGGGAGG $\texttt{CCCTGTGTGGCCGTGAGCTGCCTGTCGAGCTCACCGGC} \underline{\textbf{TAG}} \\ \texttt{CCCAGGCCACAGCCAGCCTGTCGTGTCCAGCCTG} \\$ ACGCCTACTGGGGCAGGGCAGCAGGCTTTTGTGTTCTCTAAAAATGTTTTATCCTCCCTTTGGTACCTTAATTTG GCCCCTCAGGGCTGTCGGTGTCAGCCTCCCACAGGTGGTACAGCCGTGCACACCAGTGTCGTGTCTGCTG TTGTGGGACCGTTGTTAACACGTGACACTGTGGGTCTGACTTTCTCTTCTACACGTCCTTTCCTGAAGTGTCGAG CAGAATGCACATTGGAAGCTCCCACCCCATATTGTTCTTCAAAGTGGAGGTCTCCCCTGATCCAGACAAGTGGGA GAGCCCGTGGGGGCAGGGGACCTGGAGCTGCCAGCACCAAGCGTGATTCCTGCTGCTGTATTCTATTCCAAT AAAGCAGAGTTTGACACCGTCTTAAAAAAAA

MATARTFGPEREAEPAKEARVVGSELVDTYTVYIIQVTDGSHEWTVKHRYSDFHDLHEKLVAERKIDKNLLPPKK IIGKNSRSLVEKREKDLEVYLQKLLAAFPGVTPRVLAHFLHFHFYEINGITAALAEELFEKGEQLLGAGEVFAIG ${\tt PLQLYAVTEQLQQGKPTCASGDAKTDLGHILDFTCRLKYLKVSGTEGPFGTSNIQEQLLPFDLSIFKSLHQVEIS}$ HCDAKHIRGLVASKPTLATLSVRFSATSMKEVLVPEASEFDEWEPEGTTLEGPVTAVIPTWQALTTLDLSHNSIS EIDESVKLIPKIEFLDLSHNGLLVVDNLQHLYNLVHLDLSYNKLSSLEGLHTKLGNIKTLNLAGNLLESLSGLHK ${\tt LYSLVNLDLRDNRIEQMEEVRSIGSLPCLEHVSLLNNPLSIIPDYRTKVLAQFGERASEVCLDDTVTTEKELDTV}$ EVLKAIQKAKEVKSKLSNPEKKGGEDSRLSAAPCIRPSSSPPTVAPASASLPQPILSNQGIMFVQEEALASSLSS TDSLTPEHQPIAQGCSDSLESIPAGQAASDDLRDVPGAVGGASPEHAEPEVQVVPGSGQIIFLPFTCIGYTATNQ DFIQRLSTLIRQAIERQLPAWIEAANQREEGQGEQGEEEDEEEEEEDVAENRYFEMGPPDVEEEEGGGQGEEEE EEEEDEEAEEERLALEWALGADEDFLLEHIRILKVLWCFLIHVQGSIRQFAACLVLTDFGIAVFEIPHQESRGSS $\tt QHILSSLRFVFCFPHGDLTEFGFLMPELCLVLKVRHSENTLFIISDAANLHEFHADLRSCFAPQHMAMLCSPILY$ GSHTSLQEFLRQLLTFYKVAGGCQERSQGCFPVYLVYSDKRMVQTAAGDYSGNIEWASCTLCSAVRRSCCAPSEA $\tt VKSAAIPYWLLIPQHLNVIKADFNPMPNRGTHNCRNRNSFKLSRVPLSTVLLDPTRSCTQPRGAFADGHVLELL$ VGYRFVTAIFVLPHEKFHFLRVYNQLRASLQDLKTVVIAKTPGTGGSPQGSFADGQPAERRASNDQRPQEVPAEA LAPAPVEVPAPAPAAASASGPAKTPAPAEASTSALVPEETPVEAPAPPPAEAPAQYPSEHLIQATSEENQIPSHL PACPSLRHVASLRGSAIIELFHSSIAEVENEELRHLMWSSVVFYQTPGLEVTACVLLSTKAVYFVLHDGLRRYFS ${\tt EPLQDFWHQKNTDYNNSPFHISQCFVLKLSDLQSVNVGLFDQHFRLTGSTPMQVVTCLTRDSYLTHCFLQHLMVV}$ LSSLERTPSPEPVDKDFYSEFGNKTTGKMENYELIHSSRVKFTYPSEEEIGDLTFTVAQKMAEPEKAPALSILLY ${\tt VQAFQVGMPPPGCCRGPLRPKTLLLTSSEIFLLDEDCVHYPLPEFAKEPPQRDRYRLDDGRRVRDLDRVLMGYQT}$ ${\tt YPQALTLVFDDVQGHDLMGSVTLDHFGEVPGGPARASQGREVQWQVFVPSAESREKLISLLARQWEALCGRELPV}$ ELTG

GGCACGAGGAGCGTTTCGTTTGGACTTCTCGACTTGAGTGCCCGCCTCCTTCGCCGCCGCCTCTGCAGTCCTCAG $\tt CGCAGTTATGCCCAGTTCTTCCCGCTGTGGGGACACGACCACGGAGGAATCCTTGCTTCAGGGACTCGGGACCCT$ GCTGGACCCCTTCCTCGGGTTTAGGGGATGTGGGGACCAGGAGAAAGTCAGGATCCCTAAGAGTCTTCCCTGCCT GGATGGATGAGTGGCTTCTTCTCCACCTAGATTCTTTCCACAGGAGCCAGCATACTTCCTGAAC<u>ATC</u>GAGAGTGT TGTTCGCCGCTGCCCATTCTTATCCCGAGTCCCCCAGGCCTTTCTGCAGAAAGCAGGCAAATCTCTGTTGTTCTA CTACCAACAGATCAAAGAAACCCCTCCGGCCAGTGAGAAAGACAAAACTGCTAAGGCCAAGGTCCAACAGACTCC TGCAAGCAAATGCCCTTTCCTGGCAGCACAGATGAATCAGAGAGGCAGCAGTGTCTTCTGCAAAGCCAGTCTTGA GCTTCAGGAGGATGTGCAGGAAATGAATGCCGTGAGGAAAGAGGTTGCTGAAACCTCAGCAGGCCCCAGTGTGGT TAGTGTGAAAACCGATGGAGGGGATCCCAGTGGACTGCTGAAGAACTTCCAGGACATTATGCAAAAGCAAAGACC AGAAAGAGTGTCTCATCTTCTAAGATAACTTGCCAAAATCTGTTTCCACTTTTCAGTATGATCGTTTCTTTGA GAAAAAATTGATGAGAAAAAGAATGACCACACCTATCGAGTTTTTAAAACTGTGAACCGGCGAGCACACATCTT $\tt CCCCATGGCAGATGACTATTCAGACTCCCTCATCACCAAAAAGCAAGTGTCAGTCTGGTGCAGTAATGACTACCT$ TACTAGAAATATTTCTGGAACTAGTAAATTCCATGTGGACTTAGAGCGGGAGCTGGCAGACCTCCATGGGAAAGA TGCCGCACTCTTGTTTCCTCGTGCTTTGTGGCCAATGACTCAACCCTCTTCACCCTGGCTAAGATGATGCCAGG CTGTGAGATTTACTCTGATTCTGGGAACCATGCCTCCATGATCCAAGGGATTCGAAACAGCCGAGTGCCAAAGTA CATCTTCCGCCACAATGATGTCAGCCACCTCAGAGAACTGCTGCAAAGATCTGACCCCTCAGTCCCCAAGATTGT GGCATTTGAAACTGTCCATTCAATGGATGGGGCGGTGTGCCCACTGGAAGAGCTGTGATGTGGCCCATGAGTT TGGAGCAATCACCTTCGTGGATGAGGTCCACGCAGTGGGGCTTTATGGGGCTCGAGGCGGAGGGATTGGGGATCG GGATGGAGTCATGCCAAAAATGGACATCATTTCTGGAACACTTGGCAAAGCCTTTGGTTGTTGGTGGAGGGTACAT $\tt CGCCAGCACGAGTTCTCTGATTGACACCGTACGGTCCTATGCTGCTGGCTTCATCTTCACCACCTCTCTGCCACC$ ${\tt CATGCTGCTGGAGCCCTGGAGTCTGTGCGGATCCTGAAGAGCGCTGAGGGACGGTGCTTCGCCGCCAGCA}$ ${\tt CCAGCGCAACGTCAAACTCATGAGACAGATGCTAATGGATGCCGGCCTCCCTGTTGTCCACTGCCCCAGCCACAT}$ CATCCCTGTGCGGGTTGCAGATGCTGCTAAAAACACAGAAGTCTGTGATGAACTAATGAGCAGACATAACATCTA CGTGCAAGCAATCAATTACCCTACGGTGCCCCGGGGAGAAGAGCTCCTACGGATTGCCCCCACCCCTCACCACAC ACCCCAGATGATGAACTACTTCCTTGAGAATCTGCTAGTCACATGGAAGCAAGTGGGGGCTGGAACTGAAGCCTCA TTCCTCAGCTGAGTGCAACTTCTGCAGGAGGCCACTGCATTTTGAAGTGATGAGTGAAAGAGAGAAGTCCTATTT

MESVVRRCPFLSRVPQAFLQKAGKSLLFYAQNCPKMMEVGAKPAPRALSTAAVHYQQIKETPPASEKDKTAKAKV QQTPDGSQQSPDGTQLPSGHPLPATSQGTASKCPFLAAQMNQRGSSVFCKASLELQEDVQEMNAVRKEVAETSAG PSVVSVKTDGGDPSGLLKNFQDIMQKQRPERVSHLLQDNLPKSVSTFQYDRFFEKKIDEKKNDHTYRVFKTVNRR AHIFPMADDYSDSLITKKQVSVWCSNDYLGMSRHPRVCGAVMDTLKQHGAGAGGTRNISGTSKFHVDLERELADL HGKDAALLFSSCFVANDSTLFTLAKMMPGCEIYSDSGNHASMIQGIRNSRVPKYIFRHNDVSHLRELLQRSDPSV PKIVAFETVHSMDGAVCPLEELCDVAHEFGAITFVDEVHAVGLYGARGGGIGDRDGVMPKMDIISGTLGKAFGCV GGYIASTSSLIDTVRSYAAGFIFTTSLPPMLLAGALESVRILKSAEGRVLRRQHQRNVKLMRQMLMDAGLPVVHC PSHIIPVRVADAAKNTEVCDELMSRHNIYVQAINYPTVPRGEELLRIAPTPHHTPQMMNYFLENLLVTWKQVGLE LKPHSSAECNFCRRPLHFEVMSEREKSYFSGLSKLVSAQA

ATGCCCTACCAATATCCATTGCTGACCCCGGAGCAGAAGGAGCTGTCTGACATGACTCATCGCATCGTAGCTCTG
GGCAAGGGCATCCCGGCTGCAGATGAGTCCACTGGGAGCACTGCCAAGTGGCTGCAGTCCATTGGCACCGAGAAT
ACCGAGGAGAACCGGTGCTTCTACCGCCAGCTGTGGCTGACAACCGCGTGAACCCCTGCATCAAGGGT
GTCATCCTCTTCCATGAGACGCTGTACCAAAAGGCGGATGATGGGCGTCCCTTCCCCCAAGTTATCAAATCCAAG
GGCAATGTTGTGAGCATCAAGTGTGTCAATGTCCTGGCCCACTATGCCAGCATCTGCCAGCAGAATGGCATTGTG
CTCTTCTACTGCCAGTATGTAACCGAGAAGGTGTGGCTGCTCTACAAGGCTCTGAGTGACCATCTACCTG
GAAGGCACCTTGCTGAAGTCCAATATGGTCACCCCAGGCCATGCCTGCATCCAGAAGTTTTCTCATGAGGAGATT
GCCATGGCAACTGTCACAAGCACTACACTCTGGGGAATAAGCGGCCTAGAAGGATCACAACTGGGCCAGAACAGG
GCCCACCCAGACTCATCACTGAGGCAGAGCAAGGAAGTGTCCATCAACCTCAATGCCATTAACAAGTGCCCCTC
CTGAAGCCCTGGGGCCTGACCTTCTCATATAGCTGA

MAKSKNHTTHNQSRKWHRNGIKKPRSQRYESLKGVDPKFLRNMRFAKKHNKKGLKKMQANNAKAMSARAEAIKAL VKPKEVKPKIPKGVSRKLDRLAYIAHPKLGKRARARIAKGLRLCRPKAKAKAKAKDQTKAQAAAPASVPAQAPKR TQAPTKASE

12,61/6881 FIGURE 1172

GGGCGCTGAGAGGCGAGCGTGAGCCCAGCGACAGGAGAGTGAGCTCACCACGCGCAGCGCCAAGCGCAAGCGAAGGG TCCCGAGGAGGAGCACCCATCGGTGACGCTCTTCCGCCAGTACCTGCGTATCCGCACTGTCCAGCCCAAGCCTGA CTATGGAGCTGCTGTGGCTTTCTTTGAGGAGACAGCCCGCCAGCTGGGCCTGGGCTGTCAGAAAGTAGAGGTGGC ACCTGGCTATGTGGTGACCGTGTTGACCTGGCCAGGCACCAACCCTACACTCTCCATCTTGCTCAACTCCCA CACGGATGTGGTGCCTGTCTTCAAGGAACATTGGAGTCACGACCCCTTTGAGGCCTTCAAGGATTCTGAGGGCTA CATCTATGCCAGGGGTGCCCAGGACATGAAGTGCGTCAGCATCCAGTACCTGGAAGCTGTGAGGAGGCTGAAGGT GGAGGCCCACCGGTTCCCCAGAACCATCCACATGACCTTTGTGCCTGATGAGGAGGTTGGGGGTCACCAAGGCAT GGAGCTGTTCGTGCAGCGCCTGAGTTCCACGCCCTGAGGGCAGGCTTTGCCCTGGATGAGGGCATAGCCAATCC CCATGCCTCACGCTTCATGGAGGACACAGCAGCAGAAGATGCACAAGGTTGTAAACTCCATCCTGGCATTCCG GGAGAAGGAATGGCAGAGGCTGCAGTCAAACCCCCACCTGAAAGAGGGGTCCGTGACCTCCGTGAACCTGACTAA GCTAGAGGGTGGCGTGTGCCTATAACGTGATACCTGCCACCATGAGCGCCAGCTTTGACTTCCGTGTGGCACCGGA TGTGGACTTCAAGGCTTTTGAGGAGCAGCTGCAGAGCTGGTGCCAGGCAGCTGGCGAGGGGGGTCACCCTAGAGTT TGCTCAGAAGTGGATGCACCCCCAAGTGACACCTACTGATGACTCAAACCCTTGGTGGGCAGCTTTTAGCCGGGT CTGCAAGGATATGAACCTCACTCTGGAGCCTGAGATCATGCCTGCTGCCACTGACAACCGCTATATCCGCGCGGT GGGGGTCCCAGCTCTAGGCTTCTCACCCATGAACCGCACACCTGTGCTGCTGCACGACCACGATGAACGGCTGCA $\texttt{CAGTGACAGC} \underline{\textbf{TGA}} \texttt{GCCCTGGAACTCCTAAACCTTTGCCCCTGGGGCTTCCATCCCAACCAGTGCCAAGGACCTCC}$ TCTTCCCCCTTCCAAATAATAAAGTCTATGGACAGGGCTGTCTCTGAAGTACTAACACAAGGACA

MTSKGPEEHPSVTLFRQYLRIRTVQPKPDYGAAVAFFEETARQLGLGCQKVEVAPGYVVTVLTWPGTNPTLSSI LLNSHTDVVPVFKEHWSHDPFEAFKDSEGYIYARGAQDMKCVSIQYLEAVRRLKVEGHRFPRTIHMTFVPDEEVG GHQGMELFVQRPEFHALRAGFALDEGIANPTDAFTVFYSERSPWWVRVTSTGRPGHASRFMEDTAAEKLHKVVNS ILAFREKEWQRLQSNPHLKEGSVTSVNLTKLEGGVAYNVIPATMSASFDFRVAPDVDFKAFEEQLQSWCQAAGEG VTLEFAQKWMHPQVTPTDDSNPWWAAFSRVCKDMNLTLEPEIMPAATDNRYIRAVGVPALGFSPMNRTPVLLHDH DERLHEAVFLRGVDIYTRLLPALASVPALPSDS

 $\tt CGCCAGCACGCCCTGCTTCCCGTCTGCGCGAGTCCACGCAGCTCCCCAGATCAAGAAGCTGAGGCCCCAGGTTA$ CACACTAAAGTAAATGGCAGAGGCAGAAATAACACCTATGTCCTCCTGACCCCAAGGCATGTTCTTAAAGTTCTG GAAACCTCCTGGAGGCTTCCTTGCTGCTCCTCTGGGACTGCCACCCTGGGCAGGGTGTTCTGTGGCCCCTCATCA GCACCATCCAGGTGCAGGGCCAGGCCCTCTTCTTCCGAGAGGCCCTGCCCGGCAGTGGGCAGGCTCGCTTCTCTG CTGGCTACCGGGCTGTGGCCATTGACCTGCCAGGTCTGGGGCACTCCAAGGAAGCAGCCGCCCTGCCCCTATTG GGGAGCTGGCCCCTGGCAGCTTCCTGGCGGCTGTGGTGGATGCCTTGGAGCTGGGCCCCCCGGTTGTGATCAGTC CATCACTGAGTGGCATGTACTCCCTGCCCTTCCTCACGGCCCCTGGCTCCCAGCTCCCGGGCTTTGTGCCAGTGG CCCCCATCTGCACTGACAAAATCAATGCTGCCAACTATGCCAGTGTGAAGACTCCAGCTCTGATTGTATATGGAG ${\tt ACCAGGACCCCATGGGTCAGACCAGCTTTGAGCACCTGAAGCAGCTGCCCAACCACCGGGTGCTGATCATGAAGG}$ GGGCGGGCCACCCCTGTTACCTGGACAAACCAGAGGAGTGGCATACAGGGCTGCTGGACTTCCTGCAGGGGCTCC TTGTCTTTCTACCTCTTTCTCTTGCAGTGATAGACTGAGGGGGGTAAAATCAAGAGAAAAAACTCTCAGGAATCA ${\tt ATTGTCATGTGCAGCTTTGCATATACACACATGCATACATGAGCCTCCACACAGCACTTTGCACACATGTGGACT}$ GGCTTAGGGTGTGGCCAGCCCTGAAAGCTACTTGGACACAGGTTTCAGCTGGCCCCAGCCCAGAAGTGACCCCCA TGAGGCATCTCAGCCAAGCTTGTTTCCTGCTCTGAGGCTTGTGGGGTGGAGCCAGAGTGGAGGTCGGTGAAATA AAGTGATGCAATTAGAAAAAAAAAAAAAAAAAAAA

 $\label{thm:mass} $$ MAASVEQREGTIQVQGQALFFREALPGSGQARFSVLLLHGIRFSSETWQNLGTLHRLAQAGYRAVAIDLPGLGHS$$ $$ KEAAAPAPIGELAPGSFLAAVVDALELGPPVVISPSLSGMYSLPFLTAPGSQLPGFVPVAPICTDKINAANYASV$$ $$ KTPALIVYGDQDPMGQTSFEHLKQLPNHRVLIMKGAGHPCYLDKPEEWHTGLLDFLQGLQ$$$

ATAACCCCTCATTGTTCGCAGCTGATGTCACTCGCAGTTGTGAGCGGCCGCCTCTCCCGGGGACAATGTGGGACT GAGCGGCCCAGCCGCCGCCGCCGCCGCCGCAGGACAGCCCCAGCGAGAGCCGGCCAGGTTGCAGCGC AGGGCGAGACTGTAAAGCGAATCCGGGAGCAGAGCAGTGCCCGGATCACCATCTCCGAGGGCTCCTGCCCTGAAC GCATCACCACCATCACCGGGTCTACAGCAGCTGTCTTCCATGCAGTCTCCATGATTGCTTTCAAACTGGATGAGG ACCTTTGTGCTGCTCCTGCAAATGGTGGAAATGTCTCCAGGCCTCCAGTGACCCTGCGCCTTGTCATCCCTGCCA GTCAGTGTGGCTCACTGATTGGGAAGGCTGGCACCAAGATCAAGGAGATCCGAGAGACTACGGGTGCCCAGGTAC $\tt CTGAGGTCACCAAGCTCCAGCAGCTCTCAAGCCATGCGGTCCCCTTTGCCACACCCAGCGTGGTGCCAGGACTGG$ GCAGCAAGATCAGCGAGATCCGGCAGATGTCAGGGGCACATATCAAGATCGGGAACCAAGCAGAGGGCGCTGGGG AGCGGCATGTCACCATCACTGGCTCTCCGGTCTCCATCGCCCTGGCCCAGTACCTCATCACTGCCTGTCTAGAGA AGCCCATGCCCTTCTTGGCTTTACCACCTGCTTCCCCAGGGCCGCCCGGGCCTTGGCGGCCTACACTGCCAAGA ${\tt TGGCAGCTAATGGGAGCAAGAAGGCTGAGCGGCAGAAATTCTCCCCCTAC} {\tt TGA}{\tt GGCCAGCTGAGGTACAGGC}$ ${\tt AGGGGCAGGCAGCCAGCAGGGGGGGCTGCCTCTGCACCCTACCCGCCCAAGGAGACTCCACCCTGGGGTCCC}$ TGGGGGCAGTTTCTGGCCCAGGGGTCTGAGCTGCGGCAGCCCCAGGGCAGGGGCCCTACCTCCTCAGCTCTGTG AAAAAAA

MSGSDGGLEEPELSITLTLRMLMHGKEVGSIIGKKGETVKRIREQSSARITISEGSCPERITTITGSTAAVFHA VSMIAFKLDEDLCAAPANGGNVSRPPVTLRLVIPASQCGSLIGKAGTKIKEIRETTGAQVQVAGDLLPNSTERAV TVSGVPDAIILCVRQICAVILESPPKGATIPYHPSLSLGTVLLSANQGFSVQGQYGAVTPAEVTKLQQLSSHAVP FATPSVVPGLDPGTQTSSQEFLVPNDLIGCVIGRQGSKISEIRQMSGAHIKIGNQAEGAGERHVTITGSPVSIAL AQYLITACLETAKSTSGGTPSSAPADLPAPFSPPLTALPTAPPGLLGTPYAISLSNFIGLKPMPFLALPPASPGP PPGLAAYTAKMAAANGSKKAERQKFSPY

AGCGGCTCGGACGGGGGACTGGAGGAGCCAGAGCTCAGCATCACCCTCACGCTGCGGATGCTGATGCACGGG AAGGAAGTGGGCAGCATCATCGGGAAGAAGGGCGAGACTGTAAAGCGAATCCGGGAGCAGAGCAGTGCCCGGATC ACCATCTCCGAGGGCTCCTGCCCTGAACGCATCACCACCATCACCGGGTCTACAGCAGCTGTCTTCCATGCAGTC TCCATGATTGCTTTCAAACTGGATGAGGACCTTTGTGCTCCTCCAAATGGTGGAAATGTCTCCAGGCCTCCA GTGACCCTGCGCCTTGTCATCCCTGCCAGTCAGTGTGGCTCACTGATTGGGAAGGCTGGCACCAAGATCAAGGAG ${\tt CAGGGTCAGTATGGGGCTGTGACCCCAGCTGAGGTCACCAAGCTCCAGCAGCTCTCAAGCCATGCGGTCCCCTTT}$ GCCACACCCAGCGTGGTGCCAGGACTGGATCCCGGCACACAGACCAGCTCACAGGAGTTCTTGGTTCCCAACGAT TTGATTGGCTGTGTGATCGGGCGCCAGGGCAGCAAGATCAGCGAGATCCGGCAGATGTCAGGGGCACATATCAAG ATCTCCCTCTCCAACTTCATCGGCCTCAAGCCCATGCCCTTCTTGGCTTTACCACCTGCTTCCCCAGGGCCGCCG CCGGGCTTGGCGGCCTACACTGCCAAGATGGCAGCAGCTAATGGGAGCAAGAAGGCTGAGCGGCAGAAATTCTCC GCCCAAGGAGACTCCACCCTGGGGTCCCAAACGCCGCTAACGCCCAGACGCATGGATGCACCCCCTACCCTGCCT CCATCTATGGGAGTTCTTTCTCTCAGAGTGGGGGCAGTTTCTGGCCCAGGGGTCTGAGCTGCGGCAGCCCCAGGG CAGGGGGCCCTACCTCCTCAGCTCTGTGCTTGGATACAGGGAGCCAGCAGGAGACTCCCTAGTGCCCCCACCATG GCGGGTGTCACTCACGCACTCCCCTTAGGGCTTCCTGGCCTACTGCATCCTTGTGGGAGTCAGGGAGGAG GGCCCGTTGGGTAGCTGGGGCCAGGCTTCTCTCCCCACCCTGCAGATTTCTTGCTGCTTCCACTGATACCCTT TTGACTGGAATGAACTGGCTGGGCTTGTCAGGGGGCACCCCAAAGAGGGGGCACTGCCAGGTAGCTGGGGGAGTG TCTCAGCGACCA

MSGSDGGLEEPELSITLTLRMLMHGKEVGSIIGKKGETVKRIREQSSARITISEGSCPERITTITGSTAAVFHA VSMIAFKLDEDLCAAPANGGNVSRPPVTLRLVIPASQCGSLIGKAGTKIKEIRETTGAQVQVAGDLLPNSTERAV TVSGVPDAIILCVRQICAVILESPPKGATIPYHPSLSLGTVLLSANQGFSVQGQYGAVTPAEVTKLQQLSSHAVP FATPSVVPGLDPGTQTSSQEFLVPNDLIGCVIGRQGSKISEIRQMSGAHIKIGNQAEGAGERHVTITGSPVSIAL AQYLITACLETAKSTSGGTPSSAPADLPAPFSPPLTALPTAPPGLLGTPYAISLSNFIGLKPMPFLALPPASPGP PPGLAAYTAKMAAANGSKKAEROKFSPY

ACTCTTTGGAGATGGGAATTTGTATCCCCTTCTACAGATGGAGAAGCTGAGGCTCAGAGGGTTGAATGGGCTCCC CAGGCTTACACAGCTCGTGAGACACACATAAGCACCCTGGTCAGAGTGATGTGTGGCGCTCAAGGTCCATGCAGT CTCTTTCCTCTGGGAGTTTGACTAGCCCAGCTCTGGGGTCCCCATGTAAGGGCAGGGGCAGGGTGGACTGGGCTC CTCTCGAACCCCTCTTTGGCTGCCCCAGCGAGAGCCGGCCAGGTTGCAGCGCGGACACACTCGCAGGTCGCTGTG GCCCCAGCCTCGCCTGACAGAATGAGCGGCTCGGACGGGGGGACTGGAGGAGGAGCCAGAGCTCAACATCACCCTC ACGCTGCGGATGCTGATGCACGGGAAGGAAGTGGGCAGCATCATCGGGAAGAAGGGCGAGACTGTAAAGCGAATC CGGGAGCAGGTGAGGATGGAGTTTGGGGGAGGAGCCCAGGGCACCTGATGTGGAGGGGAGATCCCTGCCCCACTT TCTCTCTGAACCACTCCTTCTGGGCTGACCAGTGAGTCCCCCAGAGGGTGGCAGTTTTGAGCCTTGCCTCAGGCC TCTGCAGAGCAGTGCCCGGATCACCATCTCCGAGGGCTCCTGCCCTGAACGCATCAĆCACCATCACCGGGTCTAC AGCAGCTGTCTTCCATGCAGTCTCCATGATTGCTTTCAAACTGGATGAGGACCTTTGTGCTGCTCCTGCAAATGG AGCAGTTGTAAGAGGGGTGTTGGGCTTATGGCGTCCTCCCCACCTAGAGAGCTCTGAGCCTGGGCAGCCCTTTTC TGGGTTATGGGAGCAGCCAGAAGTGGCCCCTGTTCTCTGTTTGCAGACTACGGGTGCCCAGGTACAGGTGGCAGG CCAGATCTGCGCTGTTATCCTGGAGTCCCCACCCAAAGGAGCCACTATCCCCTACCATCCGAGCCTCTCCCTAGG TACTGTTCTTCTCTGCCAACCAGGGCTTCTCTGTCCAGGGTCAGTATGGGGCTGTGACCCCAGCTGAGGTCAC CAAGCTCCAGCAGCTCTCAAGCCATGCGGTCCCCTTTGCCACACCCAGCGTGGTGCCAGGACTGGATCCCGGCAC ${\tt ACAGACCAGCTCACAGGAGTTCTTGGTTCCCAACGATTTGATTGGCTGTGATCGGGCGCCAGGGCAGCAAGAT}$ CAGCGAGATCCGGCAGATGTCAGGGGCACATATCAAGATCGGGAACCAAGCAGAGGGGCGCTGGGGAGCGGCATGT CACCATCACTGGCTCTCCGGTCTCCATCGCCCTGGCCCAGTACCTCATCACTGCCTGTCTAGAGACGGCCAAGTC TACCTCTGGGGGGACGCCCAGCTCGGCCCCCGCAGACCTGCCCCCCTTCTCGCCACCCCTGACGGCCCTGCC CTTCTTGGCTTTACCACCTGCTTCCCCAGGGCCGCCGCCGGGCTTGGCGGCCTACACTGCCAAGATGGCAGC ${\tt TAATGGGAGCAAGAAGGCTGAGCGGCAGAAATTCTCCCCCTAC} {\tt TGA}{\tt GGCCAGCTGAGGTACAGGCAGGGGCAGGC}$ AGGACCACCAGCAGGGGGCTGCCTCTGCACCCTACCCGCCCAAGGAGACTCCACCCTGGGGTCCCAAACGCCGCT TTCTGGCCCAGGGGTCTGAGCTGCGGCAGCCCCAGGGCAGGGGGCCCTACCTCCTCAGCTCTGTGCTTGGATACA CCTGGCCTACTGCATCCTTGTGGGAGTCAGGGAGGAGGGCCCGTTGGGTAGCTGGGGCCCAGGCTTCTCCCCAC CCCAAAGAGGGGGCACTGCCAGGTAGCTGGGGGAGTGGCATGGGGGCAGGGGCCCAGTTCTCAGCAGCAGACACTC

MPRCPALILYLQSSARITISEGSCPERITTITGSTAAVFHAVSMIAFKLDEDLCAAPANGGNVSRPPVTLRLVIP
ASQCGSLIGKAGTKIKEIREVRGEIYHPQGIRGKGAVVRGVLGLWRPPHLESSEPGQPFSGLWEQPEVAPVLCLQ
TTGAQVQVAGDLLPNSTERAVTVSGVPDAIILCVRQICAVILESPPKGATIPYHPSLSLGTVLLSANQGFSVQGQ
YGAVTPAEVTKLQQLSSHAVPFATPSVVPGLDPGTQTSSQEFLVPNDLIGCVIGRQGSKISEIRQMSGAHIKIGN
QAEGAGERHVTITGSPVSIALAQYLITACLETAKSTSGGTPSSAPADLPAPFSPPLTALPTAPPGLLGTPYAISL
SNFIGLKPMPFLALPPASPGPPPGLAAYTAKMAAANGSKKAERQKFSPY

 ${\tt GAATTCCGCCGCTGCTACACGCCTGGTGGGCAGC} \underline{{\tt ATG}} {\tt TCGGCAACAGCGGCTGCTCGTAAGCGGGGAAAGCCGGCC}$ CTCTGGGGCCGGGGCCGGCGGGGCCGCCAAGCGGCGAAAGGCCGACTCTGCGGGGGACAGGGGCAAATC CAAGGGTGGCGGCAAGATGAATGAGGAGATCTCCAGCGACTCTGAGAGCGAGAGCCTAGCTCCAAGGAAGCCTGA GGAGGAGGAGGAGGAGCTGGAGGAAACTGCACAGGAAAAGAAGCTGCGCTTGGCCAAGCTCTACCTAGAGCA GCTCCGTCAGCAAGAGGAGGAGAAGGCTGAGGCCCGTGCATTTGAGGAGGACCAGGTGGCGGGGCGCCTGAAGGA GGATGTGCTTGAGCAGAGGGGCAGGCTGCAGAAGTTGGTGGCAAAAGAGATCCAGGCCCCAGCCTCAGCTGACAT TCGCGTTTTACGGGGGCACCAGCTCTCTATCACATGTTTGGTCGTCACCCCCGATGACTCAGCCATCTTCTCTGC TGCCAAAGACTGCAGCATCATTAAGTGGAGCGTGGAGAGTGGACGGAAGCTGCATGTGATTCCTCGAGCCAAGAA GGGTGCCGAGGGAAAGCCCCCTGGCCACAGCAGCCACGTCCTCTGCATGGCCATCTCCTCCGACGGCAAGTACCT TGCCTCTGGTGACCGCAGCAAGCTCATTCTCATTTGGGAGGCCCAGAGCTGCCAGCACTTGTACACCTTCACAGG CGTGAAGGTGTGGAATGTGGCAGAGAACTCCTACGTGGAGACGCTCTTCGGACACCAGGACGCTGTGGCTGCACT GGATGCCTTGAGCCGGGAGTGCTGTGACGGCTGGGGGCCGGGATGGGACTGTACGTGTGGGAAGATCCCCGA GGAGTCCCAGCTTGTCTTCTATGGCCACCAGGGCTCCATCGACTGCATCCACCTAATCAATGAGGAGCACATGGT GTCCGGCGCGGACGATGGCTCTGTGGCCTTGTGGGGTCTCTCCAAGAAGCGACCACTTGCCCTGCAGCGTGAAGC ${\tt TCACGGGCTGCGGGGAGAGCCAGGCCTGGAGCAGCCCTTCTGGATATCGTCGGTGGCAGCCCTCCTCAACACAGA}$ $\tt CCTTGTGGCCACAGGCTCCCACAGCTCCTGTGTGCGGCTTTGGCAGTGTGGGGAAGGCTTCCGGCAGCTTGACCT$ TCTCTGTGACATCCCCCTGGTGGGTTTTATCAACAGCCTCAAGTTCTCCAGCTCTGGGGGACTTCCTGGTGGCTGG $\texttt{CCGCAGGGTCCCTGTACCCCCAGCTGCTGGTTCC} \underline{\textbf{TGA}} \texttt{CACTCTTATCCTCCTTATTTAAGTCCTTCCCAGGCTAT}$ GCCCCACCTCTTTGAAGCTT

MSATAAARKRGKPASGAGAGAGAGKRRKADSAGDRGKSKGGGKMNEEISSDSESESLAPRKPEEEEEELEETA
QEKKLRLAKLYLEQLRQQEEEKAEARAFEEDQVAGRLKEDVLEQRGRLQKLVAKEIQAPASADIRVLRGHQLSIT
CLVVTPDDSAIFSAAKDCSIIKWSVESGRKLHVIPRAKKGAEGKPPGHSSHVLCMAISSDGKYLASGDRSKLILI
WEAQSCQHLYTFTGHRDAVSGLAFRRGTHQLYSTSHDRSVKVWNVAENSYVETLFGHQDAVAALDALSRECCVTA
GGRDGTVRVWKIPEESQLVFYGHQGSIDCIHLINEEHMVSGADDGSVALWGLSKKRPLALQREAHGLRGEPGLEQ
PFWISSVAALLNTDLVATGSHSSCVRLWQCGEGFRQLDLLCDIPLVGFINSLKFSSSGDFLVAGVGQEHRLGRWW
RIKEARNSVCIIPLRRVPVPPAAGS

1273/6881 FIGURE 1184A

GCAGCTTAGGCGCCACCAAGGCAAGAACCTAGCCTCCGAGGACCCCAAAAAGAAGAGGAGCTCAGAAGCCCTCCCA CATGAGAAGAAACATACGAAAGCTACTCCGGGAGGATCAATTGGAGCCTGTTACCAAAGCAGCACAAGAAGA GTTGGAAAGAAGGAAGCCCCTGGAGCAGCAGAGGAAAGATTATGCAGCCCCTATTCCTACTGTTCCGCTGGAGTT CCTCCCTGAGGAAATTGCTTTAAGGGCAAGTGACGGTCCCCAACTGCCTCCTCGGGTCTTGGCCCAGGAAGTCAT TTGTTTGGACAGTAGCAGTGGCAGTGAGGATGAAAAAAGCAGTCGAGATGAGGTGATTGAACTGAGCTCTGGAGA GGAGGACACTCTGCACATTGTGGACAGCAGTGAATCTGTCAGTGAAGATGATGAGGAAGAAGAGAAGAGGGTGGCAC CCATGTCAATGATGTCTTAAACCAGCGTGACGCCCTTGGGCGGGTCCTTGTCAACCTAAACCACCCTCCAGAGGA GGAAAATGTCTTCCTTGCCCCACAGTTGGCACGGGCTGTGAAACCTCATCAGATTGGCGGGATCCGGTTCCTTTA CGATAACCTAGTGGAGTCTCTGGAGAGGTTTAAGACCAGCAGTGGCTTTGGCTGTATTCTGGCCCACAGCATGGG CATTGTGCCGGTTAATACTCTTCAGAATTGGCTGGCAGAGTTCAACATGTGGCTTCCACCTCCTGAAGCCCTCCC GGCTGACAACAAGCCTGAAGAAGTCCAGCCTCGGTTCTTTAAAGTTCACATCTTGAATGATGAGCACAAGACGAT GGCATCTCGTGCTAAAGTGATGGCTGATTGGGTGTCAGAGGGTGCCGTGCTGATGGGGGTACGAGATGTACAG ACTCCTCACTCTGAAGAAATCATTTGCCACAGGTAGACCGAAGAAAACCAAGAAGCGTTCTCACCCAGTCATCAT TGATCTAGATGAGGAAGATCGGCAGCAGGAGTTTCGGAGAGAGTTTGAGAAGGCTTTATGCCGCCCTGGCCCTGA TGTAGTAATCTGTGATGAGGGACACCGCATCAAAAACTGCCAGGCCAGCACCTCACAGGCTCTGAAGAATATCCG $\tt CTCTCGCCGCCGGGTGGTGCTGACTGGGTACCCTCTGCAAAACAACCTCATTGAGTACTGGTGCATGGTGGACTT$ TGTGCGCCCAGACTTCCTTGGCACCCGGCAGGAGTTCAGCAACATGTTTGAACGCCCTATCCTGAATGGGCAATG TATTGACAGCACACCTCAGGACGTCCGCCTCATGCGGTACCGGAGCCATGTCCTGCACAGTCTTCTGGAGGGCTT TGTGCAGAGGAGAGGCCACACTGTGCTGAAGATTCATCTCCCTGCCAAGGAAGAAATGTGATCCTTGTGCGGCT $\tt CTCCAAGATCCAGCGAGATTTGTATACACAGTTCATGGATCGCTTCCGGGACTGTGGTAGCAGCGGTTGGCTGGG$ GCTGAACCCCCTTAAGGCATTCTGTGTGTGTGCAAGATCTGGAATCACCCTGATGTGCTGTATGAAGCCCTTCA GAAGGAGAGCTTGGCCAATGAGCAGGACCTAGACGTGGAAGAACTTGGCTCTGCAGGGACCAGTGCCCGCTGTCC ACCACAGGGAACAAAAGGCAAGGGAGAGGATAGCACCTTGGCTTCCTCGATGGGAGAGGCAACCAATAGCAAGTT CCTACAGGGCGTTGGCTTCAACCCTTTCCAGGAGCGAGGCAACAACATTGTCACATATGAATGGGCCAAGGACCT TCTGACTAATTACCAGACTGGAGTCCTAGAAAACTCTCCCAAGATGGTACTGCTTTTCCACCTGATTGAGGAAAG TGTGAAGCTTGGGGACAAGATCCTTGTGTTTAGCCAGAGTCTTTCCACCTTGGCTCTCATCGAGGAATTCCTTGG AAAACGAGAAGTACCCTGTCCACCTGGTACCGAGGGGCCAAGGAGCACAGAAGTGGGTTCGAAACATCAGCTACTT GTTTGATGCTTCCTGGAACCCTTGCCATGATGCCCAGGCAGTATGTCGGGTATACCGTTATGGCCAGAAAAAGCC CTGTTACATCTATCGCCTTGTGGCTGATTACACTCTAGAAAAGAAGATCTATGACCGTCAGATTTCCAAGCAGGG CAAGCTAACCAAGGCTGAGAAAAAAGCAGCAAAGAAAAGCTATGAGGAAGACAAACGCACATCAGTCCCCTATAC $\tt CCGCCCATCGTATGCGCAGTATTACCCTGCCAGCGATCAGAGCCTGACCAGCATCCCCGCCTTCAGCCAGAGAAA$ CTGGCAGCCAACTTTGAAGGGTGATGAAAAGCCTGTGGCCAGTGTTCGTCCTGTGCAGTCCACCCCCATCCCCAT CAACTACTTGCAGCGTGCAGGAGTCCTTGTGCAGAAGGTGGTCACCACGACAGATATTGTTATTCCTGGACTCAA CAGCTCCACAGATGTACAGGCAAGAATTAATGCTGGTGAGAGCATCCACATCATCCGTGGGACAAAAGGGACGTA ${\tt CATCCGTACCAGTGATGGACGGATCTTTGCTGTCCGGGCAACTGGCAAACCAAAGGTTCCTGAAGATGGTCGGAT}$ $\tt CCCCGACCCTGAGGGGCTGGCCAGGCCCGTCTCTCCTGACAGCCCAGAGATCATCAGTGAGCTTCAGCAGTATGC$ ACTTATGGACAGCAGTGCTGTTCCCGGGACAGCTCTCGGAACTGAGCCTCGACTAGGGGGGTCATTGCCTCAATAG TTCCCTCTTGGTGACTGGCCAGCCCTGTGGTGACAGGCACCCAGTGCTGGACTTAAGGGGCCCACAAGCGAAAGTT GGCCACACCACCTGCTGCCCAGGAGTCATCCCGCCGGCGGTCCAGGAAGGGTCATCTGCCAGCCCCCGTGCAGCC

1274/6881 FIGURE 1184B

MRRNIRKLLREDQLEPVTKAAQQEELERRKRLEQQRKDYAAPIPTVPLEFLPEEIALRASDGPQLPPRVLAQEVI CLDSSSGSEDEKSSRDEVIELSSGEEDTLHIVDSSESVSEDDEEEEKGGTHVNDVLNQRDALGRVLVNLNHPPEE ENVFLAPQLARAVKPHQIGGIRFLYDNLVESLERFKTSSGFGCILAHSMGLGKTLQVISFIDVLFRHTPAKTVLA IVPVNTLQNWLAEFNMWLPPPEALPADNKPEEVQPRFFKVHILNDEHKTMASRAKVMADWVSEGGVLLMGYEMYR LLTLKKSFATGRPKKTKKRSHPVIIDLDEEDRQQEFRREFEKALCRPGPDVVICDEGHRIKNCQASTSQALKNIR ${\tt SRRRVVLTGYPLQNNLIEYWCMVDFVRPDFLGTRQEFSNMFERPILNGQCIDSTPQDVRLMRYRSHVLHSLLEGF}$ VQRRGHTVLKIHLPAKEENVILVRLSKIQRDLYTQFMDRFRDCGSSGWLGLNPLKAFCVCCKIWNHPDVLYEALQ $\tt KESLANEQDLD \tt VEELGSAGTSARCPPQGTKGKGEDSTLASSMGEATNSKFLQGVGFNPFQERGNNIVTYEWAKDLASSMGFNPFQERGNNIVTYEWAKDLASSMGFNPFQERGNTYEWATNASSMGFNPFQERGNTYEWATNASSMGFNPFQERGNTYEWATNASSMGFNPFQUATTYEWATNASSMGFNPFQERGNTYEWATNASSMGFNPFQUATTYEWATNASSMGFNPFQUATTYEWATNASSMGFNPFQUATTYEWATNASSMGFNPFQUATTYEWATNASSMGFNPFQUATTYEWATNASSMGFNPFQUATTYEWATNASSMGFNPFQUATTYEWATNASSMGFNPFQUATTYEWATNASSMGFNPFQUATTYEWATNASSMGFNPFQUATTYEWATNASSMGFNPFQUATTYEWATNASSMGFNPFQUATTYEWATNASSMGFNPFQUATTYEWATNASSMGFNPFQUATTYEWATNASSMGFNPFQUATTYEWATNASSMGFNPFQUATTYEWATNASSMGFNPFQUATTYEWATNASSMGFNPTTYEWATNASSMGFNPFQUATTYEWATNASSMGFNPFQUATTYEWATNAS$ LTNYQTGVLENSPKMVLLFHLIEESVKLGDKILVFSQSLSTLALIEEFLGKREVPCPPGTEGQGAQKWVRNISYF ${\tt RLDGSTPAFERERLINQFNDPSNLTTWLFLLSTRAGCLGVNLIGANRVVVFDASWNPCHDAQAVCRVYRYGQKKP} \\$ CYIYRLVADYTLEKKIYDRQISKQGMSDRVVDDLNPMLNFTRKEVENLLHFVEKEPAPQVSLNVKGIKESVLQLA ${\tt CLKYPHLITKEPFEHESLLLNRKDHKLTKAEKKAAKKSYEEDKRTSVPYTRPSYAQYYPASDQSLTSIPAFSQRN}$ ${\tt WQPTLKGDEKPVASVRPVQSTPIPMMPRHVPLGGSVSSASSTNPSMNFPINYLQRAGVLVQKVVTTTDIVIPGLN}$ ${\tt SSTDVQARINAGESIHIIRGTKGTYIRTSDGRIFAVRATGKPKVPEDGRMAASGSQGPSCESTSNGRHSASSPKA}$ PDPEGLARPVSPDSPEIISELQQYADVAAARESRQSSPSTNAALPGPPAQLMDSSAVPGTALGTEPRLGGHCLNS ${\tt SLLVTGQPCGDRHPVLDLRGHKRKLATPPAAQESSRRRSRKGHLPAPVQPYEHGYPVSGGFAMPPVSLNHNLTTP}$ ${\tt FTSQAGENSLFMGSTPSYYQLSNLLADARLVFPVTTDPLVPAGPVSSSSTATS} \\ {\tt VTASNPSFMLNPSVPGILPSYS} \\$ $\verb|LPFSQPLLSEPRMFAPFPSPVLPSNLSRGMSIYPGYMSPHAGYPAGGLLRSQVPPFDSHEVAEVGFSSNDDEDKD|\\$ **DDVIEVTGK**

TAGCCCGAGCGGGCGCGCTCGTCATCGTCCGCCAAGCGTCCGCGGAGCGCGAACGGGAGGCGGAGGCGGGGCGG GCGGCGGCGCGCACAAGCCTCTGGCGGCGCCAAGCACCCGGTTCCAGCGCGGGCCCGCGACAAACCCCGCGG CAGCGGAAGCGGCGGGGGGCATCGCGACGGCCGCGCACCGGGGACGCGAATCACCGCGCGAGTAGCGGGCG GCCCGCGCGTCTCCTCTGCCGCCGCCTCCGCCACCGCCTGGGGCCGAGCCCGCGTGTCCCGGCTCATCCGCGGC CTTCCACCAGTTCAAGCGCTTCGGCGAGATCAGCCTCCGCCTGTCGCACACGCCTGAGCTGGGCCGTGTGGCCTA CCAGTACAAGCAGCGCTCGCTGCCCCGTCGCTGCCCCCCTGCGGGAGCCCCGTGCCCGTCACGCCGCCGC GGCCACGCGCAACCTCTTCATTGGTAACCTGGACCACAGCGTATCTGAGGTGGAGCTGCGAAGGGCCTTCGAGAA ${\tt ATATGGCATCATCGAGGAGGTGGTCATCAAGAGGCCTGCCCGTGGCCAGGGCGGTGCCTATGCCTTCAAGTT}$ GGCCCGAGAGTTTGACCGCTTTGGGAGCATTCGGACCATTGATCACGTCAAAGGAGATAGCTTTGCCTATATTCA GTACGAGAGCTTGGACGCAGCCCAGGCCGCCTGTGCTAAAATGAGGGGTTTTCCCTTGGGTGGACCAGACCGCAG GCTCCGCGTGGATTTTGCCAAAGCAGAGGAGACTCGGTACCCCCAGCAGTACCAGCCCTCGCCACTCCCTGTGCA TTATGAGCTGCTCACAGATGGATACACCCGGCACCGCAACCTGGACGCCGACCTGGTGCGGGACAGGACGCCCCC $\tt CCGAAACAGCCTTGAGGGCTACAGTCGCTCAGTGCGCAGCCGGAGTGGTGAGCGTTGGGGGGCAGATGGAGACCG$ TGGTTTGCCCAAGCCCTGGGAAGAGAGGCGGAAACGGAGAAGCCTTTCCAGTGACCGTGGGAGGACAACCCATTC ACCATATGAGGAACGGAGTAGGACCAAGGGCAGTGGGCAGCAGTCAGAGCGGGGCTCCGACCGCACCCCTGAGCG CAGCCGCAAGGAGAACCACTCCAGTGAAGGGACCAAGGAGTCCAGCAGCAACTCCCTCAGCAACAGCAGACATGG GGCTGAGGAACGGGGCCACCACCACCACCACGAGGCTGCAGACTCTTCCCACGGGAAGAAGGCAAGAGACAG CGAGCGCAATCACCGGACCACAGAGGCCGAGCCCAAGCCTCTGGAAGAGCCCAAAACACGAGACCAAAAAGCTGAA GAATCTTTCAGAGTACGCTCAGACACTACAGCTGGGTTGGAATGGGCTTCTGGTGTTGAAAAACAGCTGCTTCCC ${\tt CACGTCTATGCATATCCTAGAGGGGGACCAGGGGGTGATCAGCAGTCTCCTCAAAGACCACCACTTCTGGGAGCAA}$ GCTGACCCAGCTGAAGATCGCCCAGCGCCTTCGACTGGACCAGCCCAAGCTTGACGAGGTCACACGACGCATCAA GCAGGGGAGCCCCAACGGCTATGCGGTCCTCTTAGCCACCCAGGCAACCCCCAGTGGGCTTGGCACTGAGGGGAT GCCCACAGTAGAGCCCGGTCTGCAGAGGCGGCTTCTCAGGAACCTGGTCTCCTACTTGAAACAGAAGCAGGCCGC AGGGGTGATCAGCTTGCCAGTGGGGGGGTCCAAGGGCAGAGACGGCACAGGCATGCTCTACGCCTTCCCACCCTG CGACTTTTCCCAGCAGTACCTCCAGTCAGCACTAAGGACATTGGGCAAGCTAGAAGAAGAACACATGGTGATAGT CATCGTCAGAGACACTGCCTAGCCCAAGCCTGTCTTTCCCAGCGTCATGTTTGTGTCACAAAAGCAGTTATTTTA

ACCAGCCCAGCCTTTCAGTGCAGGCTCCAGCCCTCCACCCCACCCGAGTTGCAGGATGCTGACAGACTTGC
TGAACGCTGAGGACATCAAGAAGGCGGTGGGAGCCTTTAGCGCTACCGACTCCTTCGACCACAAAAAGTTCTTCC
AAATGGTCGGCCTGAAGAAAAAGAGTGCGGATGATGTGAAGAAGGTGTTTCACATGCTGGACAAGGACAAAAGTG
GCTTCATCGAGGAGGATGAGCTGGGATTCATCCTAAAAGGCTTCTCCCCAGATGCCAGAGACCTGTCTGCTAAAG
AAACCAAGATGCTGATGGCTGCTGGAGACAAAGATGGGGACGGCAAAATTGGGGTTGACGAATTCTCCACTCTGG
TGGCTGAAAGCTAAGAAGCACTGACTGCCCCTGGTCTTCCACCTCTCT

 ${\tt MSMTDLLNAEDIKKAVGAFSATDSFDHKKFFQMVGLKKKSADDVKKVFHMLDKDKSGFIEEDELGFILKGFSPDARDLSAKETKMLMAAGDKDGDGKIGVDEFSTLVAES}$

 $\tt CCGCGCCAGTCGCCTAGCAGGTCCTCTACCGGCTTATTCCTGTGCCGGATCTTCATCGGCACAGGGGCCACTGAG$ ACGITTCTGCCTCCCTCTTTCTTCCTCCGCTCTTTCTCTCCCTCTCGTTTAGTTTGCCTGGGAGCTTGAAAGGA ${\tt GAAAGCACGGGGTCGCCCCAAACCCCTTCTGCTTCTGCCCATCACAAGTGCCACTACCGCC} \underline{{\tt ATG}}{\tt GGCCTCACTAT}$ $\verb|CTCCTCCTCTTCTCCCGACTATTTGGCAAGAAGCAGATGCGCATTTTGATGGTTGGATTGGATGCTGCCAAGAAGCAGATGCGCATTTTGATGGTTGGATTGGATTGGATGCTGCCAAGAAGCAGATGCGCATTTTGATGGTTTGGATTGGATTGGATTGGCAAGAAGCAGATGCGCAATTTTGATGGTTTGGATTGGATTGGATTGGCAAGAAGCAGATGCGCAATTTTGATTGGTTTGGATTGGATTGGATTGGCAAGAAGCAGATGCGCAATTTTGATTGGTTTGGATTGGATTGGATTGGCAAGAAGCAGAAGCAGATTGCGCAATTTTGATTGGATTGGATTGGATTGGATTGGCAAGAAGCAGAAGCAGATTGGATTGGATTGGATTGGATTGGATTGGATTGGATTGGCAAGAAGCAGAAGCAGATTGATTGGATTGGATTGGATTGGATTGGATTGGATTGGATTGGATTGA$ GACAACCATTCTGTATAAACTGAAGTTAGGGGAGATAGTCACCACCATTCCTACCATTGGTTTTAATGTGGAAAC AGTAGAATATAAGAACATTTGTTTCACAGTATGGGATGTTGGTGGTCAAGATAGAATTAGGCCTCTCTGGAAGCA TTACTTCCAGAATACCCAGGGTCTTATTTTTGTGGTAGATAGCAACGATCGTGAAAGAATTCAGGAAGTAGCAGA GCCAAATGCTATGGCCATCAGTGAAATGACAGATAAACTAGGGCTTCAGTCTCTTCGTAACAGAACATGGTATGT TCAAGCCACTTGTGCAACACAAGGAACTGGTCTGTATGAAGGACTTGACTGGCTGTCAAATGAGCTTTCAAAACG $\verb|TIMA| \verb|TIGAAATTIGGATATCTAACCAAGGACATGTTTIGATAAAATTIGGTCTAGGCTTIGTTACAACAAAATTAGTTT|$ GTATCTTGGTTATTAAACAGTATCTGGGACTGGTTTGGGCAGAATATTAAACTTATTTTGTTGCCAATTATTGTT TACCGAGTATAATGTTGCTATTTAGCAATGTGCTTGGTTTTAAAGAAATTCTCCTTGGGAAAAAAGTATCCTCTT TTTTTGAGCCCCAGACAAATAATGTTTTAAAGTTATCCCCTTGCTACTTTACTGATACCTTTATCATTCCTGAGA GCTTGTACCAGCCAGAGAAAGATCCAAAACACTACTCAGCTCTTTGCACTGAGGAAATTTTTCCCCCTACATTG ACTCCTGGCCTACATCAGCCAAACTTAACCTTGGTGGGGTTTGGATTTGATAGCCAATTAGTTCTGTGCTGGTTG CAAAGAATTGATATTTAGATGGTTTTTAATACTCAGCAGATTGTCTTCCTTTATATTGTGTCTTTTTTATGTTGC ATGTTGCTTTTGTTATCAGCCTGATTTTTTGCTCAGTATATGATAGTTCTGCTGATGTTTTGTTTATTGGGCAGA CATATCTTCATTAAGAGTTTTTGGAAAACTCACCAAATTCGATGAATACATTTTCTTCTTAACCCATTCGGAATT ATTCCTAATAAAATGATAAAATACGT

MGLTISSLFSRLFGKKQMRILMVGLDAAGKTTILYKLKLGEIVTTIPTIGFNVETVEYKNICFTVWDVGGQDRIR PLWKHYFQNTQGLIFVVDSNDRERIQEVADELQKMLLVDELRDAVLLLFANKQDLPNAMAISEMTDKLGLQSLRN RTWYVQATCATQGTGLYEGLDWLSNELSKR

TCAGGAATCGGGATTAAAAGTTAACCAGCCAGCATCCTTTGCTATAAGGTTGAATGGCGCAAAAGGCAAGATTGA TGTATAGGTGCACAGCCCCTCTGGAGCCGTGGAGGAGTGCCACGTGTCTGAGCTGGAGCCAGATAAGTATGCTGT TCGCTTCATCCCTCATGAGAATGGTGTCCACACCATCGATGTCAAGTTCAATGGGAGCCACGTGGTTGGAAGCCC AGGGGGCACCACAGGTATCCAGTCGGAATTCTTTATTAACACCACCCGAGCAGGTCCAGGGACATTATCCGTCAC CATCGAAGGCCCATCCAAGGTTAAAATGGATTGCCAGGAAACACCTGAAGGGTACAAAGTCATGTACACCCCCAT GGCTCCTGGTAACTACCTGATCAGCGTCAAATACGGTGGGCCCAACCACATCGTGGGCAGTCCCTTCAAGGCCAA GTCGTCTACAGAGACCTGCTATAGCGCCATTCCCAAGGCATCCTCGGACGCCAGCAAGGTGACCTCTAAGGGGGC TGCTGATCGGGGTCCATGGGCCCACCACCCCCTGCGAGGAGGTCTCCATGAAGCATGTAGGCAACCAGCAATACA GCCCTTTCATGTCACAGTGCCTTAAAACAGTTTTCTCAAATCCTGGAGAGAGTTCTTGTGGTTGCTTTGTTGC TIGTTTGTAATTCATTTTATACAAAGCCCTCCAGCCTGTTTGTGGGGCTGAAACCCCCATCCCTAAAATATTGCTG TIGTAAAATGCCTTCAGAAATAAGTCCTAGACTGGACTCTTGAGGGACATATTGGAGAAATCTTAAGAAATGCAAG $\verb|CTTGTTCAGGGGGCTGAGAAGATCCTGAGTACACTAGGTGCAAACCAGAACTCTTGGTGGAACAGACCAGCCACT| \\$ ${\tt ACTCTTCAGCATTTATGAAACAAGGCTAGGGGAAGATGGGCAGAGAAAAAGGGGGACACCTAGTTTGGTTGTCATT}$ TGGCAAAGGAGATGACTTAAAATCCGCTTAATCTCTTCCAGTGTCCGTGTTAATGTATTTGGCTATTAGATCACT GGCAGCCGGGCACCCTACAGAAACTCAGAGGGCAGAGTGGCAGCCCACATGTCTCTCAAGTACCTGTCCC CTCGCTCTGGTGATTATTTCTTGCAGAATCACCACACGAGACCATCCCGGCAGTCATGGTTTTGCTTTAGTTTTC CAAGTCCGTTTCAGTCCCTTCCTTGGTCTGAAGAAATTCTGCAGTGGCGAGCAGTTTCCCCACTTGCCAAAGATCC CTTTTAACCAACACTAGCCCTTGTTTTTAACACACGCTCCAGCCCTTCATCAGCCTGGGCAGTCTTACCAAAATG TGCGGGTCTTTGGCCTGAAAGTTGGGAATGGTTGGGGGAGAGAAGGGCAGCAGCTTATTGGTGGTCTTTTCACCA GAGTGTTGGGGGTAAAAGCCCACCCTACAGAAAGTGGAACAGCCCGGAGCCTGATGTGAAAGGACCACGGGTGTT GTAAGCTGG

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FIGURE 1193

 ${\tt ATAGAGGACCAAG} \underline{{\tt ATG}} {\tt GCGGCGGTGTCTGGCTTGGTGCGGAGACCCCTTCGGGAGGTCTCCGGGCTGCTG}$ AAGAGGCGCTTTCACTGGACCGCCGGCTGCGCTGCAGGTGACAGTTCGTGATGCTATAAATCAGGGTATGGAT GAGGAGCTGGAAAGAGATGAGAAGGTATTTCTGCTTGGAGAAGAAGTTGCCCAGTATGATGGGGCATACAAGGTT ${\tt ATTGCTGTAGGTGCAGCTATGGCTGGGTTGCGGCCCATTTGTGAATTTATGACCTTCAATTTCTCCATGCAAGCC}$ ${\tt ATTGACCAGGTTATAAACTCAGCTGCCAAGACCTACTACATGTCTGGTGGCCTTCAGCCTGTGCCTATAGTCTTC}$ AGAGGGCCCAATGGTGCCTCAGCAGGTGTAGCTGCCCAGCACTCACAGTGCTTTGCTGCCTGGTATGGGCACTGC AATCCAGTGGTGGTGCTAGAGAATGAATTGATGTATGGGGTTCCTTTTGAATTTCCTCCGGAAGCTCAGTCAAAA GATTTTCTGATTCCTATTGGAAAAGCCAAAATAGAAAGGCAAGGAACACATATAACTGTGGTTTCCCATTCAAGA CCTGTGGGCCACTGCTTAGAAGCTGCAGCAGTGCTATCTAAAGAAGGAGTTGAATGTGAGGTGATAAATATGCGT ACCATTAGACCAATGGACATGGAAACCATAGAAGCCAGTGTCATGAAGACAAATCATCTTGTAACTGTGGAAGGA GGCTGGCCACAGTTTGGAGTAGGAGCTGAAATCTGTGCCAGGATCATGGAAGGTCCTGCGTTCAATTTCCTGGAT GCTCCTGCTGTTCGTGTCACTGGTGCTGATGTCCCTATGCCTTATGCAAAGATTCTAGAGGACAACTCTATACCT ${\tt CAGGTCAAAGACATCATATTTGCAATAAAGAAAACATTAAATATT{\tt TAG}{\tt TTTGGACTTGAATATCAAGTCGTTGAA}$ ATTTATTTGAAATACTTGCTGGCACTGCACCTGGATTTGTACTGCAAGACCTGACTATTCATAACGGAAAACGAT TTCTAAAGCAACAGCAGGTATTTTTGTACAGGGAAGTTTAAATGTGTTTTGTGTATGGAAAACTCTCCACTCTCCT ${\tt CCCCTAGATGCCATGCTTCCTTTTGTCTGTTACGGTTGCCATGTTCTTTGAATAACAAATTATAAACATTTTAT}$ CCTCTCTCACCACAAGGACAAAGTATGGATGTGGCAGAGTCCTCATGAAAGATGTATCCAAACAAGATAACTTAT ATGTATAAAATTAAAGCATATAATATACATTTACTGTTAGTTTTGATAAGGAATAAAGGAATTTCTAACAT

G

MAAVSGLVRRPLREVSGLLKRRFHWTAPAALQVTVRDAINQGMDEELERDEKVFLLGEEVAQYDGAYKVSRGLWK KYGDKRIIDTPISEMGFAGIAVGAAMAGLRPICEFMTFNFSMQAIDQVINSAAKTYYMSGGLQPVPIVFRGPNGA SAGVAAQHSQCFAAWYGHCPGLKVVSPWNSEDAKGLIKSAIRDNNPVVVLENELMYGVPFEFPPEAQSKDFLIPI GKAKIERQGTHITVVSHSRPVGHCLEAAAVLSKEGVECEVINMRTIRPMDMETIEASVMKTNHLVTVEGGWPQFG VGAEICARIMEGPAFNFLDAPAVRVTGADVPMPYAKILEDNSIPQVKDIIFAIKKTLNI

GCGTATCGCGCAGCTGCGCTCCTGCTCAGCCTGCCCGAGCACCGCGGAGACGCTGCCGTGCGCGACGAGCTGAT GGCGGCCGTCCGCGATAACAACATGGCTCCTTACTATGAAGCCTTGTGCAAATCCCTCGACTGGCAGATAGACGT ${\tt GGACCTACTCAATAAAATGAAGAAGGCAAATGAAGATGAAGTTGAAGCGTTTGGATGAGGAGCTGGAAGATGCAGA}$ GAAGAATCTAGGAGAGAGCGAAATTCGCGATGCAATGATGGCAAAGGCCGAGTACCTCTGCCGGATAGGTGACAA ${\tt AGAGGGAGCTCTGACAGCCTTTCGCAAGACATATGACAAAACTGTGGCCCTGGGTCACCGATTGGATATTGTATT}$ CTATCTCCTTAGGATTGGCTTATTTTATATGGATAATGATCTCATCACACGAAACACAGAAAAGGCCCAAAAGCTT AATAGAAGAAGGAGAGACTGGGACAGGAGAAACCGCCTAAAAGTGTATCAGGGTCTTTATTGTGTGGCTATTCG TGATTTCAAACAGGCAGCTGAACTCTTCCTTGACACTGTTTCAACATTTACATCCTATGAACTCATGGATTATAA AACATTTGTGACTTATACTGTCTATGTCAGTATGATTGCCTTAGAAAGACCAGATCTCAGGGAAAAGGTCATTAA AGGAGCAGAGATTCTTGAAGTGTTGCACAGTCTTCCAGCAGTTCGGCAGTATCTGTTTTCACTCTATGAATGCCG TTACTCTGTTTTCTTCCAATCATTAGCGGTTGTGGAACAGGAAATGAAAAAGGACTGGCTTTTTGCCCCTCATTA TCGATACTATGTAAGAGAAATGAGAATTCATGCATACAGTCAGCTGCTGGAATCATATAGGTCATTAACCCTTGG CTATATGGCAGAAGCGTTTGGTGTGGTGTGGAATTCATTGATCAGGAACTGTCCAGGTTTATTGCTGCCGGGAG ACTACACTGCAAAATAGATAAAGTGAATGAAATAGTAGAAACCAACAGACCTGATAGCAAGAACTGGCAGTACCA TGTAACTAACAAAGGATTTGCTTTAGAGATAATTATTTGGAATTTTTATAGCTTACTTCACAATGTGCCCAGGTC AGCTGTATAAAATAAATACTGCATTGTTGTTTC

MPLENLEEEGLPKNPDLRIAQLRFLLSLPEHRGDAAVRDELMAAVRDNNMAPYYEALCKSLDWQIDVDLLNKMKK ANEDELKRLDEELEDAEKNLGESEIRDAMMAKAEYLCRIGDKEGALTAFRKTYDKTVALGHRLDIVFYLLRIGLF YMDNDLITRNTEKAKSLIEEGGDWDRRNRLKVYQGLYCVAIRDFKQAAELFLDTVSTFTSYELMDYKTFVTYTVY VSMIALERPDLREKVIKGAEILEVLHSLPAVRQYLFSLYECRYSVFFQSLAVVEQEMKKDWLFAPHYRYYVREMR IHAYSQLLESYRSLTLGYMAEAFGVGVEFIDQELSRFIAAGRLHCKIDKVNEIVETNRPDSKNWQYQETIKKGDL LLNRVQKLSRVINM

GCTCAAGTGGCCAAGGCAAGATGGGTCAAAGTCAGAGTGGTGGTCATGGTCCTGGAGGTGGCAAGAAGGATGACA AGGACAAGAAAAGAAATATGAACCTCCTGTACCAACTAGAGTGGGGAAAAAGAAGAAGAAAACAAAGGGACCAG ATGCTGCCAGCAAACTGCCACTGGTGACACCTCACACTCAGTGCCGGTTAAAATTACTGAAGTTAGAGAGAATTA AAGACTATCTTCTCATGGAGGAAGAATTCATTAGAAATCAGGAACAAATGAAACCATTAGAAGAAAAGCAAGAGG AGGAAAGATCAAAAGTGGATGATCTGAGGGGGACCCCGATGTCAGTAGGAACCTTGGAAGAGATCATTGATGACA ATCATGCCATCGTGTCTACATCTGTGGGCTCAGAACACTACGTCAGCATTCTTTCATTTGTAGACAAGGATCTGC ${\tt CCCTGGTCACAGTGATGAAGGTAGAAAAGGCCCCCCAGGAGACCTATGCAGATATTGGGGGGGTTGGACAACCAAA}$ TTCAGGAAATTAAGGAATCTGTGGAGCTTCCTCTCACCCATCCTGAATATTATGAAGAGATGGGTATAAAGCCTC TTGATTCTAGGGGAGATGTGAAAGTTATCATGGCCACAAACCGAATAGAAACTTTGGATCCAGCACTTATCAGAC $\tt CAGGCCGCATTGACAGGAAGATTGAGTTCCCCCTGCCTGATGAAAAGACGAAGAGGCGCATCTTTCAGATTCACA$ CAAGCAGGATGACGCTGGCTGATGATGTAACCCTGGACGACCTGATCATGGCTAAAGATGACCTCTCTGGTGCTG ACATCAAGGCAATCTGTACAGAAGCTGGTCTGATGGCCTTAAGAGAACGTAGAATGAAAGTAACAAATGAAGACT TCAAAAAATCTAAAGAAAATGTTCTTTATAAGAAACAGGAAGGCACCCCTGAGGGGCTGTATCTCTAATGAACCA TGGCTGTCATCAGGAAAATGGTTGGGAGATTTCTCAGTCCCTGAAAGGGATGAGGCTGGGGGAGTTGCCCAGAGG ${\tt AATCCCTGTTCCCACTGATTTTATTAGCAAAACATCCTGTGTCTTTTGGAGTACGATGTGTAAGTGCCCATTGG}$ GTGGCCTGTTGGTCACTGTGCAGCAGTCTGCTTCCCAATAAAGCGTGCTCTTTCACAA

ATCCCTTCAAAGGAAAAGCAAGGGACACTCACCTTGCAAAACCATCAAAACTATTCCCACAGACGCCACATGAGC CCCCATTTATCTGACTTAAAAGAAGCAGGGTCTGCTGGGATTCGAATCCTCTGGTTCCAGAGAGAAGCTCTTT CAAAGACTGGATTCTGGCCCACAAAAGAAGGTTCCTGCTTACTGGAATCAAGAGGTCAAAGATTTTTCTGAATCA TGCATCCACGGAGAAGAGCCCATTAGGGCTATTCCAGCAGACAGCAGTAAGGATGTCCATGAGCTTTATGTTGTT GTTGGGAGCTGGGATTCTACTCTTCCAGAAGAATATGACCTCAAAAGGAGCCACCACAGAACGAGCTCGGCACCC ATCTACGAATGTATTGCTAAGGATCATTGGGGATGGGGTGACCCAGAAGTGAACTGGCTCCATGATCCATTAAAC AATCACCCTGAAATCCACAGTGCCAGTCAACTAATGGGGCTTGGAGCCATCATTAGGTCACTGGAAAATGATATC TTCCTGGAGGTTGATACTGGCTTCACCATCCTGAGAGCAGAAGGCTTGAGGGAAGAACAGCCTCCTGGGCATGGA GGCACCTGCCATCCACATCAAATCACAGAGCCATGCTTAAAAGGGCCAGGTGGATGACTTATGTGGAAGAAGTG AGCCGGGTGAGGATTTCTACTTCGAGAAACCTTGCTCGAAGCGCTTTCATCATTCTCTCCTACACAACAAACCCT GAACTCTTAGAAGCAGCTCTTGGCACAGGAGCCTCCAACCCGTTTTTCAGCCGGCTTTCTCTACTTGTTTCTCAT TCCATGATCACAGAAAACAGCTCCATTAAGACTCTTTTCAGGTCTACCAAAGAGCTAGTGATTGCACTCAATCGA TGTTTCTTCGGCATTACTCAAAGTGCAGCTACACTCAGCCCACAGCTTCACATCAGATTTATCAGCAGAGAACAA AAGAAGTACTTGAAATTGCCACTTACAACGTTTATGAGTAAACTGGAATCCAAAGTCTGGCCTCTAGCCAAGCGG TTACGCCAGTGGCCTGACTCATATACAAAGAAGTTTGAGCACAGAATCTACCCCATCACATTTTCTGTTGGAAAC GCCTCCTACGTTTACCTGTCCATGTCTTACTACTTTGACCGCGATGATGTGGCCTTTGAAGAACTTTGCCAAATAC TTTCTTCACCAATCTCATGAGGAGGGGAACATGCCGAGAAACTGATGACGTTGCAGAACCAACGAGGTGGCCGA GACCCCCATTTGTGTGACTTCATTGAGACACATTACCTGAATGAGCAGGTGAAAGCCATCAAAGAATTGGGTGGC CACGTGACCAACTTGTGCAAGATGGGAGCACCCGAATCTGGCTCGGCAGAATATCTCTTTGACAAGCACACGCTG GGAGACAGTGATAACGAAAGCTAA

MPSKEKQGTLTLQNHQNYSHRRHMSPHLSDLKEAGSAGIRILWFQREKLFQRLDSGPQKKVPAYWNQEVKDFSES CIHGEEPIRAIPADSSKDVHELYVVVGSWDSTLPEEYDLKRSHHRTSSAPIYECIAKDHWGWGDPEVNWLHDPLN NHPEIHSASQLMGLGAIIRSLENDIFLEVDTGFTILRAEGLREEQPPGHGGTCHPTSNHRAMLKRARWMTYVEEV SRVRISTSRNLARSAFIILSYTTNPELLEAALGTGASNPFFSRLSLLVSHSMITENSSIKTLFRSTKELVIGPKD ARRDFQVVSRGSADFWRKLASSDGSICLLSIGKPELIRLIQLIK

GTCGGCGTGTCGAGTGGCTCTTCCTGGCTGCTGAGGCGGTTAAGGTCTGAGGGTCTTGTGGGGCCACGGCGCTG ATCACCAGGTGTTTGGCTTGGTCGGTTCTTATTTCTCGCCTGGCAATGGCGACGTACACCTGCATAACTTGCCGG GTGGCGTTCCGCGACGCGGACATGCAGCGGGCCCACTATAAGACGGACTGGCACCGCTACAACCTGCGGCGGAAG GTGGCCAGCATGGCCCCAGTGACCGCCGAGGGCTTCCAGGAGCGAGTGCGGGCGCAGCGGGCCGTCGCGGAGGAG GAGAGCAAGGGCTCGGCCACCTACTGCACCGTTTGCAGTAAGAAGTTTGCCTCTTTCAACGCCTACGAGAACCAC GAAAAGAACTTGGAGAAAGGACTGGGCGTGGACAGTGTGGACAAGGATGCCATGAACGCGGCCATCCAGCAGGCC ATCAAGGCCCAGCCGTCCATGTCTCCCCAAGAAGGCGCCCCCAGCGCCTGCAAAGGAGGCCAGGAATGTCGTGGCC GTGGGTACTGGTGGCCGTGGGACCCACGACCGAGACCCGAGTGAGAAACCACCCCGGCTCCAGTGGTTTGAACAG GAAGATATTGATTCTGATGAAGAATTGGAATGTGAGGATACTGAAGCAATGGACGATGTGGTGGAGCAGGATGCA GAGGAGGAAGAGGCTGAGGAAGGCCCACCCCTTGGTGCCATCCCTATCACGGACTGCTTATTTTGTTCCCATCAT TCCAGCTCGCTGATGAAGAATGTGGCTCACATGACCAAAGACCACAGTTTCTTTATTCCTGATATAGAATATCTT TCAGATATTAAGGGACTGATTAAATACTTGGGAGAGAAAGTTGGTGTTGGCAAGATTTGCTTGTGGTGCAACGAG GACCCCAATAAGGCTGAGGAGTTGCCCTCAGAAAAGAACTTGGAATATGATGATGAAACCATGGAATTGATTCTG CCTTCTGGTGCCAGAGTGGGTCATCGCTCCTTGATGAGATACTACAAACAGCGATTTGGCTTGTCAAGAGCTGTG GCAGTTGCCAAAAATCGGAAGGCCGTGGGCCGAGTACTTCAGCAGTACAGAGCCCTGGGATGGACTGGCAGCACA GGAGCGGCTCTTATGCGAGAGCGAGACATGCAGTATGTCCAAAGGATGAAATCAAAATGGATGCTGAAGACAGGA ATGAAGAACAATGCCACCAAGCAGATGCACTTTCGGGTCCAAGTGAGATTCTGAGAGTCTGCTGGGATTGAGCAA TCATCTCCTGCCCAAGTTTCCTCCTTGCCCTGAGGACCAGTGAAAGACAGATCATAGGAGAGACCCTTTTGCTGC TACITCATTCGTTCTGACCTAATAATAAAAGTTAGAACCAT

GCAGACGCCATTATCCTCTGTTTCTCTGCTGCACCGACCTCGACGCCTTGCCTGTGGCCCACTTGTTCACTGACT TAATAACTGATTGGTGTGCCCATTTAATAAAAGAATATGTAAACTGAACAGCCGGAAGAAACCTTCCCGAACACT GAAACCAATGGTGAATTTGGTAAACACCCTGCAGAAGATATGGAAGAGTAACAAGCATTTAAAAGATCTAGAAAC ACTGATGAGATGGTTGAATTACGCATTCTGCTTCAGACCAAGAATGCTGGGGCAGTGATTGGAAAAGGAGGCAAG AATATCAAGGCTCTCCGTACAGACTACAATGCCAGTGTTTCAGTCCCAGACAGCAGTGGCCCCGAGCACATATTG TATAAAGGAAGTGACTTTGACTGCGAGTTGAGGCTGTTGATTCATCAGAGTCTAGCAGGAGGAATTATTGGGGTC GAAGGTGCTAAAATCAAAGAACTTCGAGAGAACACTCAAACCACCATCAAGCTTTTCCAGGAATGCTGTCCTTAT TCCACTGACAAGAGTTGTTCTTATTGGAGGAAAACCCGATAGGGTTGTAGAGTGCATAAAGATCATCCTTGATCT TATATATGAGTCTCCCATCAAAGGACGTGCACAGCCTTATGATCCCAATTTTTATGATGAAACCTATGATTATGG TGGTTTTACAATTATGTTTGATGACCGCTGTGGACGCCCAGTGGGATTTCCCATGCGGGAAGAGGTGGTTTTGA TGGTTTCAGTGCTGATGAAACTTGGGACTCTGCAATAGATACATGGAGCCCATCAGAATGGCAGATGGCTTATGA ${\tt ACCACAGGGTGGCTCCAGATATGATTATTCCTATGCAGGGGGTCGTGGCTCATATGGTAATCTTGGTGGACTTAT}$ TATTACTACACAAGTAACGATTCCCAAAGATTTGGCTGGATCTATTATTG

ATGATCAGGTGTGATAAGTGCTGTAATGAAGGCAATTACAAGGAGAGGATATTTGAAATCATTGCTGTGGAGGGT
GAGAGTGCGAACAAGGAAGTTGTGGTAGCATTGCTAGACAGTTTTTGAGAGCCCAGCTCCAGAGCTTAAGGTTATT
GCTGAATTAAGCCACGCCTCATTGCTACGATTTCAGAGTACCCTGGTAATAGCTGAGCATGCAAATGATTCCCTA
GCACCCATTACTTTAAATACCATTACTGCAGCCACACGCCTTGGAGGTGAAGTGTCCTGCTTAGTAGCTGGAACC
AAATGTGACAAGGTGGCACAAGATCTCTGTAAAGTAGCAGGCATAGCAAAAGTTCTGGTGGCTCAGCATGATGTG
TACAAAGGCCTACTTCCAGGTGAGGTTTTCCAGTAG

 ${\tt MKVELCSFSGYKIYPGHGRRYARTDGKVFQFLNAKCESAFLSKRNPRQINWTVLYRRKHKKGQSEEIQKKRTRR\dot{A}} \\ {\tt VKFQRAITGASLADIMAKRNQKPEVRKAQREQAIRAAKEAKKAKQASKKTAMAAAKAPTKAAPKQKIVKPVKVSAPRVGGKR} \\ {\tt PRVGGKR} \\$

GCTCCTCCACAGGAGGCCTACACGCCGCCGCTTGTGCTGCCGCCATGTCGCTAGTGATCCCTGAAAAGTTCCAGC
ATATTTTGCGAGTACTCAACACCAACATCGATGGGCAGCGAAAATAGCCTTTGCCATCACTGCCATTAAGGGTG
TGGGCCGAAGATATGCTCATGTGGTGTTGAGGAAAGCAGACACTGACCTCACCAAGAGGGCGGGAGAACTCACTG
ATGATGAGGTGGAACGTGTGATCACCGTTATGCAGAATCCACGCCAGTACAAGATCCCAGACTGGTTCTTGAACA
GACAGAAGGATGTAAAGGATGGAAAATATAGCCAGGTCCTAGCCAATGGTCTGGACAACAAGCTCCGTGAAGACC
TGGAGCGACTGAAGAAGATTCGGGCCCATAGAGGGCTGCGTCACTTCTGGGGCCTTCGTGTCCGAGGCCAGCACA
CCAAGACCACTGGCCGCCGTGGCCGCACCGTGGGTGTCCCAAGAAGAAATAAGTCTGTAGGCCTTGTTTAA
TAAATAGTTTATATACC

ACCGCGGGGCCTGGGTCCCAGCCGGCAGCAGAGAGCTGGTCGCCCACCCCAAGCTACTGCTGCCGCCTGGCT ATTTCCCGGCGGGGCGGTACGTGGTGGTGGCTGAGAGCCCCCTGCCGCCTGGCGAGTGGGAGCTGTGCCGCGCAG TCCCGGGCCCTGCTTACGAGGAGGAGGGCACTCCCCTGCGCTACCAGCGTCTGGTGCCCTCTCGCAGCCGCATCG TGCGGACGCCCTCCCTGAAGGACAGCCCGGCAGGCCGGGGGCTCAGCAAGGCCGCCGTGTCCGAGGAGCTCAAGT GCCTGCCCCTTGGGAGAGAGGGCTTCGGGCGAGCCCTGGGACCCCGGGCACAGTGCCCACAGTGTGTGCTGC GGAGATCGCCTGACGGGGCCCCTGTGCAAGTCTTTGTACCTGAAAAAGGAGAGATCATCAGCCAGGTGTAACTCT AGAAGCCCTGACCTAAGGATTTATATGTGGATTGTCCTCAATACCCCTGTGATATGATTATGTTTTATCCCCC ${\tt AGGGGACGAGTGAAGCAGAGTGGGCCACCTTGGGAGTTCTCCAACACTCTGTGCTCTGGTTCTAAGAAATTCCCT}$ GGGGAACTGCCCCTGGCCCTCCTGTCCCACTATTGCTGGAGGCTGGACATGGTACATACTCATGCACATGACTCT TGATGCACACCAAGTGGTAGGTCAAAGGTCAGTATATCCCGGTGGTGTATTGTCTTGCTAGACCCTGCTATTT TCCTGACCCCTAAATCCTCTTTAGGGACCCAGTCACTATACCCTGTCTATGCCCTGTGGGCTCCCAGACCCCTG AGCTTTGAGTCAGTGGCATCACGGTTTGTAGCCTCAGGGGGTCCGGCTGGGGGCTGATCCATGCTTGTGGTTAGT GGACAGCAGCCACCCTTTGACAGCTACCTCTGGGCATCTCAAGGGCTTGCAGCCCCACTGCTCCTTAACATTT TGTTTGTTTGTTTTGAGATGGAGTCTCGCTCTGTCGCCCAGGCTGGAATGCAGTAGCAAGATTTCGGCTCACTG ${\tt CAACCCCGTCTCCCGGGTTCAAGCGAATCTCCTGCCTCAGCCTTCCGAGTAGCTGGGATTACAGGCAAGCACCA}$ CCTCAAGTGATCCACCTGCCTTGGCCTTTCAAAGTGCTGGGATTACAGGCATGAGCCACCGCACCTGGCCCTTCT ${\tt AACGITTITCATCATAGTCCCAAAAACCAATACTTTACAAGTGGTTTTGGAAAGGCACCACTTTTGTGGC} \underline{{\tt ATG}} {\tt T}$ TCTGGTTGGGAGAGGGAGTCACAGTTCCTACTCCCCCACCAGCTATGCTTCTGCTCTGAGAAGGTGGTTATTTA ${\tt GGGCCTTCTTTGCTTCCAGGTCAGGGGACCTGCTTCAA} \underline{{\tt TGA}}{\tt GAAAGCAACTGAATTGAGGCTAGGAGGAGGTAGGG}$ AGAGCTGAGTTCTGACTTCACCTGTGCAGAACTCTCTGCCCCCATGTTACCTGGACTGGAACAGACTGTGAATAT GCCGATTGCACAAGGGTGCCAAGGGAAGACCCAGGATGGCCCATCAAAGGAACCTGGGGGAGGATGCAGGAGGCT GAAGGGATGCACCTGGCATTTCTCTCACTGTGCTCTTACCGCATCAGCAACCCCCAACTTTTGGGCCTACTCTGC $\tt CCCCCATGCGTGAATACCCTGCTTGGATGCTGTGCTTTTCCGGTTTGTCTCTAAGCCCCTTTCTCCAGGGCATGT$ TGGTTTCCCTGGCCTCTCAGTGTCCTAACTGGAGCCCAGAGTGCCTTGTACTGAGCCAGGAGACGGCTGAGCACT GGCCCTCCACACCTAAGCGTCCTTTACATTAACTTATTGGTCTTGTATAACACCTGGTGCCATTGCCAAGTGGCT GTGTCCTCAGCTACAGAGCTGGAATTGTGTGGGGTTTAGTGCTAAATACTTCAATAAAGTCTGTTTTTTGTGATT **GGCTG**

 ${\tt MFWLGEGVTVPTPPTSYASALRRWLFIQTWTYSLPRADEMLNFLWGHSLIVPAAATGASLEAACAKTTQLSLGSHPRAFFASRSGDLLQ}$

ATTAATCCCAGTGCTTTTACGCCCGGAAACAAAGAGACTAAGCCAGACTATGGGGGGAAAGGGAGATAAGAAGGAT CCTGGAACTTTAAAGAGGGAAAGAGTGAGATTCAGAAATCGCCAGGACTGGACTTTAAGGGACGTCCTGTGTCAG CACAAGGGACTGGCACACACAGACACGAGACCGAGGAGAAACTGCAGACAAATGGAGATACAAAGACTTAGAA GGACAGCTCCTTTCACCTCATCCTACTTGTCCAGAAGTGTGTGGATCAGAACCCCACCCCCATGCCACTATTAGA GGCAGCCACGGAGGACGGAAAGTGCCTTTGGTTTCTCCGGACAGCAGTAGGCCAGCTCGGTTTCTGAGGCACACT GGGAGGTCTCGCGGAATTGAGAGATCCACTCTGGAGGAACCAAACCTTCAGCCTCTCCAGAGAAGGAGGAGTGTG CCCGTGTTGAGACTAGCTCGCCCAACAGAGCCGCCAGCCCGCTCGGACATCAATGGGGCCGCCGTGAGACCTGAG CAAAGACCAGCCAGGGGCTCTCCGCGTGAGATGATCAGAGATGAGGGGTCCTCAGCTCGGTCAAGAATGTTG CGTTTCCCTTCGGGGTCCAGCTCTCCCAACATCCTTGCCAGCTTTGCAGGGAAGAACAGAGTATGGGTCATCTCA GCCCCTCATGCCTCGGAAGGCTACTACCGCCTCATGATGAGCCTGCTGAAGGACGATGTGTACTGTGAGCTGGCG GAGGGCCAGATCCTGGAGCAGCCCTGGACCCTAGCCTCATCCCTAAGCTGATGAGCTTCCTGAAGCTGGAGAAG GGCAAGTTTGGCATGGTGCTGCAGAGAAGACGCTGCAGGTGGAGGAGCGCTATCCATATCCCGTTAGGCTGGAA GCCATGTACGAGGTCATCGACCAAGGCCCCATCCGTAGGATCGAGAAGATCAGGCAGAAGGCTTTGTCCAGAAA TGTAAGGCCTCTGGTGTAGAGGGCCAGGTGGTGGCGGAGGGGAATGACGGTGGAGGGGGAGCAGGAAGGCCAAGC GCCCCAGCCACACAGTGACTCGGTCCACGTCCCGGGCGGTAACAGTTGCTGCAAGACCTATGACCACCACTGCC TTTCCCACCACGCAGAGGCCCTGGACCCCTCACCCTCCCACAGGCCCCCTACAACCACTGAGGTGATCACTGCC AGGAGACCCTCAGTTTCAGAGAATCTTTACCCTCCATCCCGGAAGGATCAGCACAGGGAGAGGCCACAGACAACC AGGAGGCCCAGCAAGGCCACCAGCTTGGAGAGCTTCACAAATGCCCCTCCCACCACCATCTCAGAACCCAGCACA AGGGCTGCTGGCCCAGGCCGTTTCCGGGACAACCGCATGGACAGGCGGGAACATGGCCACCGAGACCCAAATGTG GTGCCAGGTCCTCCCAAGCCAGCAAAGGAGAAACCTCCCAAAAAGAAGGCCCAGGACAAAATTCTTAGTAATGAG TATGAGGAGAAGTATGACCTCAGCCGGCCTACTGCCTCTCAGCTGGAGGACGAGCTGCAGAGTCCCAAGAAGTCA GTGGCCGACCTGCTGGGGTCCTTTGAAGGCAAACGAAGACTCCTTCTGATCACTGCTCCCAAGGCTGAGAACAAT ATGTATGTGCAACAACGTGATGAATATCTGGAAAGTTTCTGCAAGATGGCTACCAGGAAAATCTCTGTGATCACC ATCTTCGGCCCTGTCAACAACAGCACCATGAAAATCGACCACTTTCAGCTAGATAATGAGAAGCCCATGCGAGTG GTGGATGATGAAGACTTGGTAGACCAGCGTCTCATCAGCGAGCTGAGGAAAGAGTACGGAATGACCTACAATGAC TTCTTCATGGTGCTAACAGATGTGGATCTGAGAGTCAAGCAATACTATGAGGTACCAATAACAATGAAGTCTGTG TTTGATCTGATCGATACTTTCCAGTCCCGAATCAAAGATATGGAGAAGCAGAAGAAGGAGGGGCATTGTTTGCAAA GAGGACAAAAAGCAGTCCCTGGAGAACTTCCTATCCAGGTTCCGGTGGAGGAGGAGGTTGCTGGTGATCTCTGCT CCTAACGATGAAGACTGGGCCTATTCACAGCAGCTCTCTGCCCTCAGTGGTCAGGCGTGCAATTTTGGTCTGCGC CACATAACCATTCTGAAGCTTTTAGGCGTTGGAGAGGAAGTTGGGGGGAGTGTTAGAACTGTTCCCAATTAATGGG AGCTCTGTTGTTGAGCGAGAGACGTACCAGCCCATTTGGTGAAAGACATTCGTAACTATTTTCAAGTGAGCCCG GAGTACTTCTCCATGCTTCTAGTCGGAAAAGACGGAAATGTCAAATCCTGGTATCCTTCCCCAATGTGGTCCATG GTGATTGTGTACGATTTAATTGATTCGATGCAACTTCGGAGACAGGAAATGGCGATTCAGCAGTCACTGGGGATG CGCTGCCCAGAAGATGAGTATGCAGGCTATGGTTACCATAGTTACCACCAAGGATACCAGGATGGTTACCAGGAT GACTACCGTCATCATGAGAGTTATCACCATGGATACCCTTACTGA

MTWRMGPRFTMLLAMWLVCGSEPHPHATIRGSHGGRKVPLVSPDSSRPARFLRHTGRSRGIERSTLEEPNLQPLQ
RRRSVPVLRLARPTEPPARSDINGAAVRPEQRPAARGSPREMIRDEGSSARSRMLRFPSGSSSPNILASFAGKNR
VWVISAPHASEGYYRLMMSLLKDDVYCELAERHIQQIVLFHQAGEEGGKVRRITSEGQILEQPLDPSLIPKLMSF
LKLEKGKFGMVLLKKTLQVEERYPYPVRLEAMYEVIDQGPIRRIEKIRQKGFVQKCKASGVEGQVVAEGNDGGGG
AGRPSLGSEKKKEDPRRAQVPPTRESRVKVLRKLAATAPALPQPPSTPRATTLPPAPATTVTRSTSRAVTVAARP
MTTTAFPTTQRPWTPSPSHRPPTTTEVITARRPSVSENLYPPSRKDQHRERPQTTRRPSKATSLESFTNAPPTTI
SEPSTRAAGPGRFRDNRMDRREHGHRDPNVVPGPPKPAKEKPPKKKAQDKILSNEYEEKYDLSRPTASQLEDELQ
VGNVPLKKAKESKKHEKLEKPEKEKKKKMKNENADKLLKSEKQMKKSEKKSKQEKEKSKKKKGGKTEQDGYQKPT
NKHFTQSPKKSVADLLGSFEGKRRLLLITAPKAENNMYVQQRDEYLESFCKMATRKISVITIFGPVNNSTMKIDH
FQLDNEKPMRVVDDEDLVDQRLISELRKEYGMTYNDFFMVLTDVDLRVKQYYEVPITMKSVFDLIDTFQSRIKDM
EKQKKEGIVCKEDKKQSLENFLSRFRWRRRLLVISAPNDEDWAYSQQLSALSGQACNFGLRHITILKLLGVGEEV
GGVLELFPINGSSVVEREDVPAHLVKDIRNYFQVSPEYFSMLLVGKDGNVKSWYPSPMWSMVIVYDLIDSMQLRR
QEMAIQQSLGMRCPEDEYAGYGYHSYHQGYQDGYQDDYRHHESYHHGYPY

TTCTGGGAAGGGAGAATGGCGGCCCCGGGCTGCGGCTGGGAGCGGGAAGACTCTTTGAAATGCCTGCGGTGCTA GAGCGACTGAGCCGCTATAATAGCACGTCCCAAGCTTTTGCTGAGGTGCTGCGGCTGCCGAAGCAGCAGCTGAGG AAGCTGCTGTACCCGCTGCAGGAAGTAGAGCGGTTCCTCGCCCCCTACGGGAGGCAAGACCTTCACCTGCGTATC TTTGACCCAAGCCCGGAGGACATAGCCAGGGCGGACAACATCTTCACGGCCACTGAACGGAACCGCATCGACTAC GTCAGCTCCGCCGTATCGACCACGCCCCGGACCTTCCGCGGCCAGAGGTGTGTTTTATAGGCAGAAGCAAT GTTGGAAAATCATCTCTAATCAAGGCTTTATTTTCACTGGCCCCTGAGGTTGAAGTCAGAGTCTCCAAAAAACCA GGACACACAAAGAAAATGAATTTTTCAAAGTTGGAAAACATTTTACAGTGGTGGACATGCCAGGTTATGGCTTT AGAGCACCTGAAGATTTTGTTGACATGGTAGAGACCTATCTAAAAGAACGAAGGAACTTGAAGAACATTTTTA TTAGTGGATAGCGTTGTTGGAATTCAAAAAACAGACAATATTGCCATAGAAATGTGTGAAGAATTTGCCATACCT TATGTGATTGTATTAACAAAATTGACAAATCTTCCAAGGGACATCTTTTAAAACAAGTGCTTCAGATCCAGAAA TTTGTTAACATGAAAACTCAAGGATGTTTTCCTCAGTTGTTTCCTGTAAGTGCTGTGACCTTTTCTGGAATCCAC CTGTTGAGATGCTTTATAGCCAGTGTAACAGGAAGTCTTGACTAATGGTTCCCGGTTTAGCTGAAGATTCAAAAA AAAAAAAAAAAGCTTTATGCTAACTGGAGTTAAATACCTAGAAGAATTTCAACATTGTTTTAAATGTTGTGCATC TGTAACTTCAGGAGGATCACTTGAGCTTTAAAACCTGTGCCTTCTCGAAACAAGAATTTGTGCCTGAGGTGAAAA AAGTTTGTAAGTTATTGAATTATGGTGTTCATTAGAACAGCTACTAGCTGATTCCCCCTATTTTAACAAACTGACA AGAGCACATCCATAAAATGAAAACCTGTTACAACTATGTACAGAAGGGTTTGACGTTTTATTGGGCTTTTGTCTT TTAAAGAATATGTCTACTATGGGTATTTTTTTTTTAAATGTTAAAATGGGCTAGGTAAAAGGGGGCTGCTTTTCT GTTAAGCATCGATAGGTAAGTTGATGGATAAAAGTTACTATGTAAGCCTATTTTTTTGAGTCCTTATTTGAATAT TGAAAACATTCTTGATAAAATGTGTTAGTCCATGTTGGAAACAACCGAAAGAACAGAATTCAAGTTCTAGTTCTG ATGTTTATTATATATGTTGGATCTTGGGCAACTTACTTGATTTCTCGGAAATTCATTTGTTACTGTAAACGTGAA AGCTATTAAGATTCAAATGAATGGTTTTACAGCAGGTAACATGTGAGAAGACAGCTACATATTTGTAAAGCCAAA CCAACAAAGAAATATAGCAAAATTCACAGGTAGATTTATTACAAGAAATGTCCTTTCATGGGGGAAGTAACATTT TCACTAGTGAAAAAGCAAAAAACAAAAATAGCTTTAAGTGAGAAAACTAATTT

 ${\tt TCGGAGGGAACAAGCTAGCT} \underline{{\tt ATG}} {\tt TTGACTGGTGTTCTTCTGGCTAATGGAACACTTAATGCATCCATTCTTAAT$ AGCCTTTATAATGAAAATTTGGTTAAAGAAGGAGTTTCAGCAGCTTTTGCTGTGAAGCTCTTTAAATCATGGATA AATGAAAAGATATCAATGCAGTAGCTGCAAGTCTTCGGAAAGTCAGCATGGATAACAGACTGATGGAACTCTTT ATAGTCTGGTCAAGTGTAATGAGCACTGTGGAATGGAACAAAAAAGAGGGAGCTTGTAGCAGAGCAAGCCATCAAG CACTTGAAGCAATACAGCCCTCTACTTGCTGCCTTTACTACTCAAGGTCAGTCTGAGCTGACTCTGTTACTGAAG ATTCAGGAGTATTGCTATGACAACATTCATTCATGAAAGCCTTCCAGAAAATAGTGGTGCTTTTTTATAAAGCT GAAGTCCTGAGCGAGGAGCCCATTTTGAAGTGGTATAAAGATGCACATGTTGCAAAGGGGAAGAGTGTTTTCCTT GAGCAAATGAAAAAGTTTGTAGAATGGCTCAAAAATGCTGAAGAAGAATCTGAATCTGAAGCTGAAGAAGGTGAC ${f TGA}$ ATTTTGAAACTACACCCTCAGTAAAGCAAACAGGAGTTGTAGATAAAATGTCATGTCTCATGTGTCCTGGTT CTTACATCTTCCTACCTCCCTGTATCAAGCATGATATAAGGGCTTTCATGGCAAATTTTATTTTAACTGTTTCTA TGGTTGCTGGAAATGTTGGGTTTAGTTTCTAAAACCATGTTTTAAGTAGCTACAGGAGCTATAGATTTGAATCTA ATGTTGCATTAGTCTTTCAGTTATCTTCTACCTCCTGTATTTTCTACTGTAATAATGTAATTTAAGGCCTTCCA GTTATAAAAATTCTGTTTGCAAATTAAACTGGAAAAGTATCCAGAGTCTCAAAAGGCAATGATTTGTGAGATAAT ATGGCATGCCCGGAGCCCTGCTCATCAATGAAAAACCCATATGTAATAATCGAATTCATTTAACATGAATCTTGA TATCCTAAAGCTCAATTGTTTGGTCTCTGGTTTTCATCCTTAGAGAAGCCATGGAGAACAGACTTGAAAAGTTTA GGAAATCATAATGTGGCAGAGGTGGTGGGAAGAAGAAGTTGAGCTTTTTCCCCTTGAGAAACTTCTGCATTTAG TTTGTATCTTTCCAGGCAAAACAAATGGGTATTCTTTTCATACAACCATTTTCAAATGAACCTTAGAAAAGTCTT AACATTTAAGGTATTTTATGCACAGAATACACTTAGATTGATAGGAAAGAACTCGTAATGGAGTTTGAGTAAAGA AAATGACTGATGTACTAAACCCAGTAAAAATTGTTGAAAATGTTAAAGGTCAGCATGTTCTAATTGGGAATCTAG ATATAGCTTAGATTTCCTATTGGCTTAGAGTATTTGCTATAACAAATGAAGTGCAATGACAATTATATATTCCTA CTCGGTCATACTGGACTGGCTTCGTTCTCTTAACATACTCAGTAATGACTCAAGCCTCTGGCTATTAACATACCC TATGGGAAGACTTTGTGTTAAAAGTGAACATTTTGAAGGTTTTTAACTGGTGAAACTAGCCTGGAATAATGCCAC CAGAGACTGAGTGGAAATCGCCCCTTTTGAAGGTGCCATTCTTATGAGCCAAAAGTTTGTCATTTAAAAGTTCAT TTTGCGGGAATAACATGTAATATAATTTGAAATAAAGGTATAGTAACCTTAAAAAGAACATTATAACTGATTGTT GTGAATGGGGTGAATTTGTTAAAATGAGTAACTTTGATAAAGTTTTTCATGCACAGGCAAAATGTATTCACTAGA TACTTACACTT

MLTGVLLANGTLNASILNSLYNENLVKEGVSAAFAVKLFKSWINEKDINAVAASLRKVSMDNRLMELFPANKQSV EHFTKYFTEAGLKELSEYVRNQQTIGARKELQKELQEQMSRGDPFKDIILYVKEEMKKNNIPEPVVIGIVWSSVM STVEWNKKEELVAEQAIKHLKQYSPLLAAFTTQGQSELTLLLKIQEYCYDNIHFMKAFQKIVVLFYKAEVLSEEP ILKWYKDAHVAKGKSVFLEQMKKFVEWLKNAEEESESEAEEGD

1306/6881 FIGURE 1216A

GGCACGAGGGATCGGCGGAGCTCCCACCTCCGCTTACAGCTCGCTGCCGCCGTCCTGCCCCGCGCCCCCAGGAGA ${\tt CCTGGACCAGACCACGATG}{\tt TGGAAACGCTGGCTCGCGCTCGCGCTCGCGCTGGTGGCGGTCGCCTGGGTCCGCGC}$ TGGACACTGCAAAGAGAAATCCGTAAGTCCATCTGCCAGCCCAGTTGTTTGCTATCAGTCCAACCGTGATGA GCTCCGACGTCGCATCATCCAGTGGCTGGAAGCTGAGATCATTCCAGATGGCTGGTTCTCTAAAGGCAGCAACTA CAGTGAAATCCTAGACAAGTATTTTAAGAACTTTGATAATGGTGATTCTCGCCTGGACTCCAGTGAATTCCTGAA GTTTGTGGAACAGAATGAAACTGCCATCAATATTACAACGTATCCAGACCAGGAGAACAACAAGTTGCTTAGGGG ${\tt ACTCTGTGTTGATGCTCTCATTGAACTGTCTGATGAAAATGCTGATTGGAAACTCAGCTTCCAAGAGTTTCTCAA}$ GTGCCTCAACCCATCTTTCAACCCTCCTGAGAAGAAGTGTGCCCTGGAGGATGAAACGTATGCAGATGGAGCTGA GACCGAGGTGGACTGTAACCGCTGTGTCTGTGCCTGTGGAAATTGGGTCTGTACAGCCATGACCTGTGACGGAAA GAATCAGAAGGGGGCCCAGACCCAGACAGAGGAGGAGATGACCAGATATGTCCAGGAGCTCCAAAAGCATCAGGA CATCTTCTCCACTTCAGCGCTGAGTTCAGTATACACAAGTGTCTGCTACAGTCGCCAAATCACCAGTATTTGCTT ${\tt GCCACAGCCTTCATTTCTAGGAGTGCTTTAAGAGAAACTGTAAATGGTGCTCTGGGGCTGGAGGCTAGTAAGGAA}$ ACTGCATCACGATTGAAAGAGGAACAGACCCAAATCTGAACCTCTTTTGAGTTTACTGCATCTGTCAGCAGGCTG GGAACGCTCTCTGCTTCCAGCCTCTTTCCATTGCCGTCAGCATGACAGACCTCCAGCATCCACGCATCTCTTGGT GGAGGGTACACCCAAATGATGCAGATACTTGTATACTTTGAGCCCCTTAGCGACCTAACCAAATTTTAAAAATAC TTATATTATTGTTTTTAATATTTTTTTTTTTTGACTAGGTATTAAGCTTTTGTAATTATTTTTCAGTAGTCCCA CACATACTAGATGCAGCCCATAGTTGGCCCCCCTAGCTTCCAGCAGTCCACTATCTGCCAGAGGAGCAAGGGTGC TTCTGAGAAGTTGAGGCAAATCAGTATTCCCAAGGATGGCGACAAGGGCCAAGCAGGGCTTAGGATATCCCA CCTCAGTGAGCTGGTAAGAATGCACTAACCTTTTGATTTGATAAGTTATAAATTCTGTGGTTCTGATCATTGGTC CAGAGGGGAGATAGGTTCCTGTGATTTTTCCTTCTTCTTATAGAATAAATGAAATCTTGTTACTAGAACAAGAA ATGTCAGATGGCCAAAAACAAGATGACCAGATTTGATCTCAGCCTGATGACCCTACAGGTCGTGCTATGATATGG AGTCCTCATGGGTAAAGCAGGAAGAGAGTGGGAAAGAGAACCACCCCACTCTGTCTTCATATTTGCATTTCATGT TTCTGTGATTATTAACCCCACTCACTACCCTGTTTCAGATGCATTTGGAATACCAAAGATTAAATCCTTGACATA AGATCTCATTTGCAGAAAGCAGATTAAAGACCATCAGAAGGAAATTATTTAGGTTGTAATGCACAGGCAACTGTG AGAAACTGTTGTGCCAAAAATAGAATTCCTTCTAGTTTTTCTTGTTCTCATTTGAAAGGAGAAAATTCCACTTTG TTTAGCATTTCAAGCTTTTATGTATCCATCCCATCTAAAAACTCTTCAAACTCCACTTGTTCAGTCTGAAATGCA GCTCCCTGTCCAAGTGCCTTGGAGAACTCACAGCAGCACGCCTTAATCAAAGGTTTTACCAGCCCTTGGACACTA TGGGAGGAGGGCAAGAGTACACCAATTTGTTAAAAGCAAGAAACCACAGTGTCTCTTCACTAGTCATTTAGAACA TGGTTATCATCCAAGACTACTCTACCCTGCAACATTGAACTCCCAAGAGCAAATCCACATTCCTCTTGAGTTCTG CAGCTTCTGTGTAAATAGGGCAGCTGTCGTCTATGCCGTAGAATCACATGATCTGAGGACCATTCATGGAAGCTG TCCTTCAGCCCTCTAAAAGCATAGGGCTTAGCCTGCAGGCTTCCTTGGGCTTTCTCTGTGTGTAGTTTTGTAA ACACTATAGCATCTGTTAAGATCCAGTGTCCATGGAAACATTCCCACATGCCGTGACTCTGGACTATATCAGTTT TTGGAAAGCAGGGTTCCTCTGCCTGCTAACAAGCCCACGTGGACCAGTCTGAATGTCTTTCCTTTACACCTATGT TTTTAAGTAGTCAAACTTCAAGAAACAATCTAAACAAGTTTCTGTTGCATATGTGTTTGTGAACTTGTATTTGTA

1307/6881 FIGURE 1216B

MWKRWLALALALVAVAWVRAEEELRSKSKICANVFCGAGRECAVTEKGEPTCLCIEQCKPHKRPVCGSNGKTYLN HCELHRDACLTGSKIQVDYDGHCKEKKSVSPSASPVVCYQSNRDELRRRIIQWLEAEIIPDGWFSKGSNYSEILD KYFKNFDNGDSRLDSSEFLKFVEQNETAINITTYPDQENNKLLRGLCVDALIELSDENADWKLSFQEFLKCLNPS FNPPEKKCALEDETYADGAETEVDCNRCVCACGNWVCTAMTCDGKNQKGAQTQTEEEMTRYVQELQKHQETAEKT KRVSTKEI

WO 2004/030615 PCT/US2003/028547

FIGURE 1219

 ${\tt MSFPKYKPSSLRTLPETLDPAEYNISPETRRAQAERLAIRAQLKREYLLQYNDPNRRGLIENPALLRWAYARTIN} \\ {\tt VYPNFRPTPKNSLMGALCGFGPLIFIYYIIKTERDRKEKLIQEGKLDRTFHLSY}$

GATGACACAATAATTTTTGGTTGAAGAAGATAGAAATCAGTGTTTCAGAAGCAGAAAAACGAACTGGAAGAAA TGCCATGAACATGCAAGAACATATACTGCTTACCTCATTGAAACAAGGTCAGTTGAACATACCGATGGTCAGAG TGTCCTAACAGACTCACTATGGCGGCGATATAGTGAATTTGAGTTGTTGAGAAGCTACCTTTTAGTTTACTATCC TCCAGATTTTGTGGAGAGGCGACGGATTGGTTTAGAAAACTTTCTCTTGAGGATTGCTTCACATCCCATCCTTTG GCTGAAGGCAGACTCCAGGTTAAAAGCGCTTAATGCAACATTCAGAGTGAAAAACCCAGACAAGAGATTTACTGA CCTTAAGCACTATAGTGATGAACTGCAGTCTGTCATCTCACATCTTCTTCGAGTCAGAGCTAGAGTAGCAGATCG ACTCTATGGTGTATATAAAGTACATGGGAATTATGGTCGAGTTTTCAGTGAATGGAGTGCCATAGAAAAAGAAAT GGGTGATGGACTGCAGAGTGCTGGTCATCATATGGATGTGTATGCATCTTCTATTGATGATATTTTGGAAGATGA AGAACATTATGCAGATCAGTTAAAAGAGTATCTTTTTTATGCAGAAGCATTGCGGGCTGTGTGCAGGAAACATGA ACTTATGCAGTATGACTTGGAGATGGCTGCTCAGGACTTAGCATCCAAGAAGCAGCAGTGTGAGGAACTGGTAAC TGGGACTGTGAGAACATTCTCTTTGAAGGGAATGACTACCAAGCTCTTTGGTCAAGAAACTCCAGAGCAGAGAGA AGCCAGAATAAAGGTGCTAGAAGAACAAATAAATGAAGGAGAACAACAGCTAAAGTCTAAAAATCTGGAAGGCAG AGAATTTGTGAAAAACGCATGGGCTGATATTGAACGCTTCAAAGAACAAAAGAACCGAGACTTAAAGGAGGCCCT CATAAGCTATGCAGTCATGCAGATCAGTATGTGCAAAAAAGAGTCTCACCCTGTCACCCAGGCTGGAGTGCAATGG CATGATCTCAGCTCACTACAACCTCCGCCTCCCGTGTTCAAGCAATTCTACCTCATCCAGCCGAGTAGATGGGAT TACAGGGAATTCAAGTTTGGACCAATGCTAAGGAATGCTTTAGCAAGATGTAATCCTGTGAATTGAATTTCTCTT CAATCAAAGTGCCCCAAAACAGAAGCACAAGTAAATAAAAGAAATTTAAGTCACTACCTAGTATACATAAACATA TACAATAAGTTAAATAAATTCAGCTTTCTTTAACTTAATTGTGGTCGTGTTAATGTAGCACAAAAAATATATTTT CAAGACCAGCTGTTTCAGATCTATTAATGTAGGGAATTTTTCCCTAAGATTGAATTCCTATATTTACTTGGTAAG ATCCACTAATCTGTTATAGGGAGTTGTTTTCTCTTGCCTTATAGTTGAGCTATTTGGTTTGACAAAGCTCAGCAG ATGCCTTCAATTTGTGTTTTACCAGAATTTTGATACTGGTCAGAAATTTTATACTGCCAACAAAGAAGACTCAAC TTCTCAGATCTATAATGGGATACATTGTCATCCTCTAGCAACTCCTATATAGAAAGTTTTAACTGAATATGTTAC ATATAAGAATTAAATTCTTCTCAAATAATTCTTAACCTCAGTAATGAGCCTAAATTTACTCTGGCTCTCTA CACATGGCATTTCAGGGTATAAGATGTAGCATTTCAATGTGTAAGATATATGTACTAAACATATGTGTTGCTATC TTCATCATTAACATCCTTCTTTTCTATTGCTTGGCTGTAATTTTTGTAAAGATAAATTATATTGTTTTTTTGTAT GTGTGTTTGTAGTATATGTTCAGAAGGCAAGCATCTTCATTTTGCTAGCTTTGCAGAATCTTAAAATGTGTACTC GTTATTTCTAATGATGTAAAAAAAATCCCTAGTCCTGTTTAGCATTTGACTTTTTATATGTTTTAAATGTTGC

1312/6881 FIGURE 1221A

GCAATTTTAGAATGTGCTGGACAAAATGTAGAAAGGGAATGTTCTCAGCAAGCTCAGCAGCGCAAAAATGATTAT GTTTCCTCTGTTTTGCAGGAGTGTGAAAAAAAAAAATTACTCATCCATTTGCCTCCCAGCCATTGGGACAGGAAAT GCCAAACAACACCCAGATAAGGTTGCTGAAGCCATAATTGATGCCATTGAAGACTTTGTCCAGAAAGGATCAGCC CAGTCTGTGAAAAAAGTTAAAGTTGTTATCTTTCTGCCTCAAGTACTGGATGTGTTTTATGCCAACATGAAGAAA ${\tt AGAGAAGGGACTCAGCTTTCTTCCCAACAGTCTGTGATGTCTAAACTTGCATCATTTTTGGGCTTTTCAAAGCAA}$ TCTCCCCAAAAAAAGAATCATTTGGTTTTGGAAAAGAAAACAGAATCAGCAACTTTTCGGGTGTGGTGAAAAT GTCACGTGTGTGGAATATGCTATCTCCTGGCTACAAGACCTGATTGAAAAAGAACAGTGTCCTTACACCAGTGAA GATGAGTGCATCAAAGACTTTGATGAAAAGGAGTATCAGGAGTTGAATGAGCTGCAGAAGAAGTTAAATATTAAC ATTTCCCTGGACCATAAGAGACCTTTGATTAAGGTTTTGGGAATTAGCAGAGATGTGATGCAGGCTAGAGATGAA ATGAGGCGATGATCAAGAGGGTTCGATTGGGCAAAGAACAGGAATCCCGGGCAGATTGTATCAGTGAGTTTATA GAATGGCAGTATAATCGACAATAACACTTCTCATGTGTTTTAACAAAATGACCAATCTGAAATTAGAGGATGCAA GGAGAGAAAAAAAAAAAAACAGTTGATGTCAAAATTAATCATCGGCACTACACAGTGAACTTGAACACATACACTG GTGATATGAAGCAGCAGAATTTCTGTGTGGTGGAGCTGCTGCCTAGTGATCCTGAGTACAACACGGTGGCAAGCA AGTTTAATCAGACCTGCTCACACTTCAGAATAGAGAAGATTGAGAGGATCCAGAATCCAGATCTCTGGAATAGCT ATGCCGGCTCCGTGCCACACGTCAATCGAAATGGCTTTAACCGCAGCTATGCCGGAAAGAATGCTGTGGCATATG GAAAGGGAACCTATTTTGCTGTCAATGCCAATTATTCTGCCAATGATACGTACTCCAGACCAGATGCAAATGGGA CAAAGAACCCTCAAAATCCTACTGACCTGTATGACACTGTCACAGATAATGTGCACCATCCAAGTTTATTTGTGG CATTTTATGACTACCAAGCATACCCAGAGTACCTTATTACGTTTAGAAAATAACACTTTGGTATCCTTCCCACAA TTATTATCTTGAGAGCAAATAACTTGGAAAATTTAAATGAGATAATGCAGTTGCAACTGTGTCCACAAGTATG ${\tt ACAGCTAAGCACAGCTGCCACTGCCAGGAGACAGGCCCCATGTCAGGATGCCATAGTGCTGTGGGGGAGCACAGTAT}$ TACCCAGTGGGTAGGGCTTCTGTCTTCCCTGGGAGCAGGGATGGTATCTTAGTCAATTTTTTTCCCTTGAGATGA GACTCCCATCCAAAGTAGGAACTATCTCTTTAACATTCTTGACTCACTATCACTTTACCTCAAATTGAACAGATT TTTTTTTGAGATGGAGTTTCACTCTTGTTGCCCAGGCTGGAGTGCAATGGCGCGATCTCAGCTCACTGCAGCCAC TGCCTCCCAGGTTCAAGTGATTCTCCTGCCTCAGCCTCCGAGTAGCTGGGATTACAGGCATGCGCTAACACCC CAGCTAATTTTGTATTTTTAGTAGAGACGAGGTTTCTCCATGTTCGACAGGCTGGTCTCGAACTCCCACCTCAGC CTCCCAAACTGCTGGGATTACAGGTGTGAGCCACCGTGACCAGCCAATGTGCCTTCTTATAGTGTCTACTCATTG GTCTTGTTCTGCCCAGTGATAACAATGGGATAACGCCTGCTACACATCTTCATTGTGAAACCCTTCCCCTGTGC TGAGATTAAATGAACTCTAAGATTATTAAATAGTATATTTTCCTTGACAGCCTAGCGTTTGATGATTTTAAAGCC TTTTAAAAATTTCCCCAGGTAAGTTTAAGATTCAAACACCATCTATTGAGCACCTACATTGTGTGCCAGGTAGTA AAATAGGTGCTTTCATACACATTGTCTCAATTCCTGTGAGGTCAGAATTATCTCTGCATTTGAAACTTGAGGAAA CATGCTCAGAGTGCAAGAAGCTTCCTTGCCTGAGATCACCTAGAAAGGAACCCTCAGAGCCGGCAACTGAATCTT GGTCCCTGTGATGTCAAGCCCATTGCTCTCCCACTGCAGAACATGGCCTCTAGATTAATGCCACCGATTCAGGAA CACCTCCGACAGTCTTGAAATACCCCCATGTTGCCTTGTTTTGTTTTTCCTTCTGGCTTCTTCTATTACAGTCTC TTCATTGGAAGCTCTGTAGGCCAAGGCCAGAGCTGATACTGACACGGAGCCAATGCAGATAGCACATCAGATGCT

1313/6881 FIGURE 1221B

MKKREGTQLSSQQSVMSKLASFLGFSKQSPQKKNHLVLEKKTESATFRVCGENVTCVEYAISWLQDLIEKEQCPY
TSEDECIKDFDEKEYQELNELQKKLNINISLDHKRPLIKVLGISRDVMQARDEIEAMIKRVRLAKEQESRADCIS
EFIEWQYNDNNTSHCFNKMTNLKLEDARREKKKTVDVKINHRHYTVNLNTYTATDTKGHSLSVQRLTKSKVDIPA
HWSDMKQQNFCVVELLPSDPEYNTVASKFNQTCSHFRIEKIERIQNPDLWNSYQAKKKTMDAKNGQTMNEKQLFH
GTDAGSVPHVNRNGFNRSYAGKNAVAYGKGTYFAVNANYSANDTYSRPDANGRKHVYYVRVLTGIYTHGNHSLIV
PPSKNPQNPTDLYDTVTDNVHHPSLFVAFYDYQAYPEYLITFRK

 $\tt CGTGGCTGCTGCCAATCTGGGTGGTCCTGCCATCATGGCTGTCCTCTGCAAAGGTCTCCTCGCTCATTGAGA$ GAATCTCTGACCCCAAGGACTTGAAAAAACTGCTCAGAACCCGGAATAATGTACTGGTGCTTTACTCCAAATCTG AGGTGGCAGCTGAAAATCATCTCAGGTTACTGTCCACAGTGGCCCAGGCGGTGAAAGGACAAGGGACCATCTGCT GGGTGGACTGTGGTGATGCAGAGAGTAGAAAATTGTGCAAGAAGATGAAAGTTGACCTGAGCCCGAAGGACAAAA AGGTTGAATTATTCCATTACCAGGATGGTGCATTTCATACTGAATATAACCGAGCTGTGACATTTAAGTCCATAG TGGCCTTTTTGAAGGATCCAAAAGGGCCCCCACTGTGGGAGGAAGATCCTGGAGCCAAAGATGTTGTCCACCTTG GCAGCATGTGCAAGAGGATGATGCCGCATTTCCAGAAGGCTGCGACTCAGCTGCGAGGCCACGCCGTGCTGGCCG GGATGAATGTCTACTCCTCTGAATTTGAAAACATCAAGGAGGAGTACAGCGTGCGCGGCTTCCCCACCATCTGCT ATTTTGAGAAAGGACGGTTCTTGTTCCAGTATGACAACTATGGGTCCACAGCTGAGGACATTGTGGAGTGGCTGA AGAATCCGCAGCCGCCACAGCCCCAGGTCCCTGAGACTCCCTGGGCAGATGAGGGCGGCTCCGTTTATCACCTGA $\tt CCGATGAAGACTTTGACCAGTTTGTGAAGGAACACTCCTCTGTCCTCGTCATGTTCCACGCCCCATGGTGTGGCC$ ACTGTAAGAAATGAAGCCGGAGTTTGAGAAGGCAGCAGAAGCCCTCCATGGAGAAGCCGGATAGCTCTGGTGTCC ATTTTAAGAATGGAGAGAATACGCAGTGCCTGTGCTCAGGACAAAGAAGAAGTTTCTCGAGTGGATGCAAAACC $\tt CTGAGGCCCCCGCCCCAGAGCCCACGTGGGAAGAGCAGCAGCAGACAAGCGTGTTGCACCTGGTGGGGGACAACT$ ${\tt TCCGGGAGACCCTGAAGAAGAAGAACACCTTGGTCATGTTCTACGCCCCTTGGTGCCCACACTGTAAGAAGA}$ TCATTCCGCACTTTACTGCTACTGCTGATGCCTTCAAAGATGACCGAAAGATTGCCTGTGCCGCTGTTGACTGTG TCAAAGACAAGAACCAAGACCTGTGCCAGCAGGAGGCGGTCAAGGGCTACCCCACTTTCCACTACTACCACTATG GGAAGTTCGCAGAAAAGTATGACAGCGACCGCACAGAATTGGGATTTACCAATTATATTCGAGCCCTCCGGGAGG $\texttt{GAGACCATGAAAGACTAGGGAAAAAGAAGGAAGAGTTA} \underline{\textbf{TAA}} \underline{\textbf{TCCTGCCTCAGAAAAAGCTTTTCCATTACACTG}$ TGAATGATACCTGTTTTGTTGTTTCTGAATTTCCCCCGAATTC

MARAGPAWLLLAIWVVLPSWLSSAKVSSLIERISDPKDLKKLLRTRNNVLVLYSKSEVAAENHLRLLSTVAQAVK GQGTICWVDCGDAESRKLCKKMKVDLSPKDKKVELFHYQDGAFHTEYNRAVTFKSIVAFLKDPKGPPLWEEDPGA KDVVHLDSEKDFRRLLKKEEKPLLIMFYAPWCSMCKRMMPHFQKAATQLRGHAVLAGMNVYSSEFENIKEEYSVR GFPTICYFEKGRFLFQYDNYGSTAEDIVEWLKNPQPPQPQVPETPWADEGGSVYHLTDEDFDQFVKEHSSVLVMF HAPWCGHCKKMKPEFEKAAEALHGEADSSGVLAAVDATVNKALAERFHISEFPTLKYFKNGEKYAVPVLRTKKKF LEWMQNPEAPPPPEPTWEEQQTSVLHLVGDNFRETLKKKKHTLVMFYAPWCPHCKKVIPHFTATADAFKDDRKIA CAAVDCVKDKNQDLCQQEAVKGYPTFHYYHYGKFAEKYDSDRTELGFTNYIRALREGDHERLGKKKEEL

 ${\tt MKLGGTHSPFRACSEPEDAAMERSAFMELDAGSRLVMHLREWPALLVSSTGWTEFEQLTLDGHNLPSLVCVITGS} \\ {\tt VDLGVCLHMSSSGLDLPMKVVDMFGCCLPVCAVNFKCLHELVKHEENGLVFEDSEELAALQMLFSNFPDPAGKLN} \\ {\tt QFWKNLRESQQLRWDESWVQTVLPLVMDIQLLGQRLKPRDPCCPSRSFFSESQGKPF} \\ {\tt VDLGVCLHMSSSGLDLPMCAVQTVLPLVMDIQLLGQRLKPRDPCCPSRSFFSESQGKPF} \\ {\tt VDLGVCLHMSSSQLRWDESWVQTVLPLVMDIQLLGQRLKPRDPCCPSRSFFSESQGKPF} \\ {\tt VDLGVCLHMSSSQLRWDESWVQTVLPLVMDIQLGQRLKPRDPCCPSRSFFSESQGKPF} \\ {\tt VDLGVCLHMSSSQLRWDESWVQTVLPLVMDIQLGQRLXPRDPCCPSRSFFSESQGKPF} \\ {\tt VDLGVCLHMSSSQLRWDESWVQTVLPLVMDIQLGQRLXPRDPCCPSRSFFSESQGKPF} \\ {\tt VDLGVCLHMSSSQLRWDESWVQTVLPTMSSSQLRWDSSQL$

ATTCCCATCGGCCGAGGCTGTCACTTTACGCTCATAACCGTTTTTCTTTACTGCACTCGTGTCGGGAGGAAAGGG ${\tt GC}\underline{{\tt TGA}}{\tt GGGGCCCTGTCGTACGGTGCGGATGGTGGTGGCCTGCGAGGCTCATTTCTAGCAAGGAACAAGGCTTT}$ CCCGCTTTGATTTATAAATATTATGTTTACAAAGCTGTAATATATAGAAATTGATAAGACGTGTCCCTGTCCCT GGAAACGCAGGCACCGCGTGTTTGGAAAGACATTCATCTGGGCTGTTTGACAGACTCCCCAGTTGGTGCCATGCT AAGAGCATTGCAGGCATCGGGACTGTCACATTTGACAAGATCAAAGCTGCAGGAAAATGGACAGTGAGGTTCAGA GAGATGGAAGGATCTTGGATTTGATTGATGATGCTTGGCGAGAAGACAAGCTGCCTTATGAGGATGTCGCAATAC CACTGAATGAGCTTCCTGAACCTGAACAAGACAATGGTGGCACCACAGAATCTGTCAAAGAACAAGAAATGAAGT GGACAGACTTAGCCTTACAGTACCTCCATGAGAATGTTCCCCCCATTGGAAACTGACGCTTGGCTCCTTTCTTGT TCAGCACTCAAAAATGTACACCCATTTAGTTTGTGGTAGCAAAGTGCAAATGCGAAATTGAATGAGAAACTGAGAT TTCTCAGTAATGGTGAATATTTCGCTCTTTAAACCTAAAACTCTTCATTGAGTAGCTTATATTTGAACATGATTG GTTAAACATTTGCCTCTACCTCTGATTTTGCTTTGCTGTCAAAGTTTAACACCTTCCAACTACTTATGTGTGTCC TGTAACACAGGTGATTGAACGTATGAGAGGGAAAGGCAAAGAAAAAGGAAGCCAGACACTAGGAGAATTATTAAC TTCTCATACTTCCCCACATTGAGAAGCATTCGGAGTGTATTTAGCCTGTAGATGTTGTGATATGCAAATATCCCA TTCCCTGGTTACTGGCATTCCTAAGATTCTTCATGGTATTTTCAAACTTTGGATAAATTTACAGATTAGAAAGAT ATCTGACAGTTAATCTCTGTTCTCCTTACAAATTCCTTTTGTGCTGGAAAGGATCTTTGGCTAGGTGGATGA CTAGTTTTATTCAAAGCCTTTTCTCAAAGCCCTTTCAGTTACAACCACCCCACTATGGAATCAGTATTTAGTTAT AGTGTCTTTCATGTTCTCCCCCAGATTGTAAACTCTGTAAGAAGCTGCTTGTATCTGTATCCCTTGTTGAAACT CTGAAAACACTGAATAACTAAAATCTCTTCTCATCCTTTT

 ${\tt MRGRGGGRGRSKRLPRWPGAGKGFQRPRPRFWRRGNAFVAQCRTSPYSHRPRLSLYAHNRFSLLHSCREERDLRG} \\ {\tt TPRPPRLRFHVWYILPEAGSRS}$

 ${\tt AGTGGCGGAGAGGATCGTGGTACTGCT} \underline{{\tt ATG}} {\tt GCGGAATCATCGGAATCCTTCACCATGGCATCCAGCCCGGCCCAG}$ CGTCGGCGAGGCAATGATCCTCTCACCTCCAGCCCTGGCCGAAGCTCCCGGCGTACTGATGCCCTCACCTCCAGC ${\tt CCTGGCCGTGACCTTCCACCATTTGAGGATGAGTCCGAGGGGCTCCTAGGCACAGAGGGGCCCCTGGAGGAAGAA}$ GAGGATGGAGAGGAGCTCATTGGAGATGGCATGGAAAGGGACTACCGCGCCATCCCAGAGCTGGACGCCTATGAG ATGCGGCAGCGTGACCGGGAGGCTGGCCCGGGGCCTGGGCCGCGTGGGCTCCTGTATGACAGCGATGAG GAGGACGAGGAGCGCCCTGCCCGCAAGCGCCCAGGTGGAGCGGCCACGGAGGACGAGGAGGACGAGGAG ATGATTGAGAGCATCGAGAACCTGGAGGATCTCAAAGGCCACTCTGTGCGCGAGTGGGTGAGCATGGCGGGCCCC GAGCGCATCAGCGACATGTGCAAAGAGAACCGTGAGAGCCTGGTGGTGAACTATGAGGACTTGGCAGCCAGGGAG CACGTGCTGGCCTACTTCCTGCCTGAGGCACCGGCGGAGCTGCTGCAGATCTTTGATGAGGCTGCCCTGGAGGTG GAGGAGCTGCGCTCGCTGAGGCAGCTGCATCTGAACCAGCTGATCCGCACCAGTGGGGTGGTGACCAGCTGCACT GGCGTCCTGCCCCAGCTCAGCATGGTCAAGTACAACTGCAACAAGTGCAATTTCGTCCTGGGTCCTTTCTGCCAG GAGACCATCTATCAGAACTACCAGCGTATCCGAATCCAGGAGAGTCCAGGCAAAGTGGCGGCTGGCCGGCTGCCC CGCTCCAAGGACGCCATTCTCCTCGCAGATCTGGTGGACAGCTGCAAGCCAGGAGACGAGATAGAGCTGACTGGC ATCTATCACAACAACTATGATGGCTCCCTCAACACTGCCAATGGCTTCCCTGTCTTTGCCACTGTCATCCTAGCC AACCACGTGGCCAAGAAGGACAACAAGGTTGCTGTAGGGGAACTGACCGATGAAGATGTGAAGATGATCACTAGC CTCTCCAAGGATCAGCAGATCGGAGAAGATCTTTGCCAGCATTGCTCCTTCCATCTATGGTCATGAAGACATC AAGAGAGGCCTGGCTCTGGCCCTGTTCGGAGGGGAGCCCAAAAACCCAGGTGGCAAGCACAAGGTACGTGGTGAT ATCAACGTGCTCTTGTGCGGAGACCCTGGCACAGCGAAGTCGCAGTTTCTCAAGTATATTGAGAAAGTGTCCAGC ATGAATGACCAGGACAGAACCAGCATCCATGAGGCCATGGAGCAACAGAGCATCTCCATCTCGAAGGCTGGCATC GTCACCTCCCTGCAGGCTCGCTGCACGGTCATTGCTGCCGCCAACCCCATAGGAGGGCGCTACGACCCCTCGCTG GTGGACCCAGTCCAGGACGAGATGCTGGCCCGCTTCGTGGTGGGCAGCCACGTCAGACACCCCCAGCAACAAG GAGGAGGAGGGCTGCCAATGGCAGCGCTGCTGAGCCCGCCATGCCCAACACGTATGGCGTGGAGCCCCTGCCC CAGGAGGTCCTGAAGAAGTACATCATCTACGCCAAGGAGGAGGGTCCACCCGAAGCTCAACCAGATGGACCAGGAC AAGGTGGCCAAGATGTACAGTGACCTGAGGAAAGAATCTATGGCGACAGGCAGCATCCCCATTACGGTGCGGCAC GAGCAGGTGACATATCAGCGCAACCGCTTTGGGGCCCAGCAGGACACTATTGAGGTCCCTGAGAAGGACTTGGTG GATAAGGCTCGTCAGATCAACATCCACAACCTCTCTGCATTTTATGACAGTGAGCTCTTCAGGATGAACAAGTTC ${\tt AGCCACGACCTGAAAAGGAAAATGATCCTGCAGCAGTTC} \underline{{\tt TGA}}{\tt GGCCCTATGCCATCCATAAGGATTCCTTGGGAT}$ TCTGGTTTGGGGTGGTCAGTGCCCTCTGTGCTTATGGACACAAAACCAGAGCACTTGATGAACTCGGGGTACTA TCACCTTTGGGTGGGATGCCTTGCCAGTGTGTCTTACTTGGTTGCTGAACATCTTGCCACCTCCGAGTGCTTTGT TGGATGTCAGGAGAGCTGCCTCTTGGCGTGAGTTGCGTATTCAGGCTGCTTTTGCTGCCTTTGGCCAGAGA GCTGGTTGAAGATGTTTGTAATCGTTTTCAGTCTCCTGCAGGTTTCTGTGCCCCTGTGGTGGAAGAGGGCCACGAC ${\tt AGTGCCAGCGCAGCGTTCTGGGCTCCTCAGTCGCAGGGGTGGGATGTGAGTCATGCGGATTATCCACTCGCCACA}$ GTTATCAGCTGCCATTGCTCCCTGTCTGTTTCCCCACTCTCTTATTTGTGCATTCGGTTTGGTTTCTGTAGTTTT AATTTTTAATAAAGTTGAATAAAATAT

MAESSESFTMASSPAQRRRGNDPLTSSPGRSSRRTDALTSSPGRDLPPFEDESEGLLGTEGPLEEEEDGEELIGD
GMERDYRAIPELDAYEAEGLALDDEDVEELTASQREAAERAMRQRDREAGRGLGRMRRGLLYDSDEEDEERPARK
RRQVERATEDGEEDEEMIESIENLEDLKGHSVREWVSMAGPRLEIHHRFKNFLRTHVDSHGHNVFKERISDMCKE
NRESLVVNYEDLAAREHVLAYFLPEAPAELLQIFDEAALEVVLAMYPKYDRITNHIHVRISHLPLVEELRSLRQL
HLNQLIRTSGVVTSCTGVLPQLSMVKYNCNKCNFVLGPFCQSQNQEVKPGSCPECQSAGPFEVNMEETIYQNYQR
IRIQESPGKVAAGRLPRSKDAILLADLVDSCKPGDEIELTGIYHNNYDGSLNTANGFPVFATVILANHVAKKDNK
VAVGELTDEDVKMITSLSKDQQIGEKIFASIAPSIYGHEDIKRGLALALFGGEPKNPGGKHKVRGDINVLLCGDP
GTAKSQFLKYIEKVSSRAIFTTGQGASAVGLTAYVQRHPVSREWTLEAGALVLADRGVCLIDEFDKMNDQDRTSI
HEAMEQQSISISKAGIVTSLQARCTVIAAANPIGGRYDPSLTFSENVDLTEPIISRFDILCVVRDTVDPVQDEML
ARFVVGSHVRHHPSNKEEEGLANGSAAEPAMPNTYGVEPLPQEVLKKYIIYAKERVHPKLNQMDQDKVAKMYSDL
RKESMATGSIPITVRHIESMIRMAEAHARIHLRDYVIEDDVNMAIRVMLESFIDTQKFSVMRSMRKTFARYLSFR
RDNNELLLFILKQLVAEQVTYQRNRFGAQQDTIEVPEKDLVDKARQINIHNLSAFYDSELFRMNKFSHDLKRKMI

GCGTTCCTGGGTGCCTGTGTGGCTGGGTCTGATGAGCCTGGCCCAGAGGGCCTCACCTCCACCTCCCTGCTAGAC CTCCTGCTGCCCACTGGCTTGGAGCCACTGGACTCAGAGGAGCCTAGTGAGACCATGGGCCTGGGAGCTGGGCTG GGAGCCCCTGGCTCAGGCTTCCCCAGCGAAGAGAATGAAGAGTCTCGGATTCTGCAGCCACCACAGTACTTCTGG GAAGAGGAGGAAGAGCTGAATGACTCAAGTCTGGACCTGGGACCCACTGCAGATTATGTTTTTCCTGACTTAACT GAGAAGGCAGGTTCCATTGAAGACACCAGCCAGGCTCAAGAGCTGCCAAACCTCCCCTCTCCCTTGCCCAAGATG AAGGAAGAGGTAGAAAACAAGAGGAGGAGGAAGAGGAGGAGCTGCTCCCTGTGAATGGATCCCAAGAAGAAGCC TCCGGGGACCAGGCCTCATCAGGTGTGGAGGTGGAGAGCAGCATGGGGCCCAGCTTGCTGCCTTCAGTCACC CACGAGGAGGTGCCGGCCTTGCCTTCATTCCCTCAAACCACAGCTCCCAGTGGGGCCGAGCACCCAGATGAAGAT TTGGGACAAGAAGATCTCAACCAGCAGCTCCTAGAAGGGCAGCAGCTGAAGCTCAATCCAGGATACCCTGGGAT ${\tt ATAGACTGTGAGGTGTTCCGGCAGCACCGGGGGCCACAGCTCCTGGCCCTGGTGGAAGAGGTGCTGCCCCGCCAT}$ GGCAGTGGCCACCATGGGGCCTGGCACATCTCTCTGAGCAAGCCCAGCGAGAAGGAGCAGCACCTTCTCATGACA TGGCAGCGCCGGCTGCCCAAGCTCAAGCACGTGTCGCACGGCGAGGAGCTGCGCTTCGTGGAGAACGGCTGCCAC GACAACCCCACGCTGGACGTGGCCAGCCAGCCAGTCGGAGATGCAGGAGAAGCACCCCAGCCTGAACGGCGGC GGGGCCCTCAACGGCCCGGGGAGCTGGGGGGCCCTCATGGGGGGCCAAGCGGGACCCCGAGGACTCGGACGTGTTC GAGGAGGACACGCACCTGTGAGCGCAGCCGAGGCGCAGGCCGAGTGGGCCCAGGACCAAGCGAGGTGGACCCC GAAACGGACGCCCGGAGCCCGCACCAGCCCCGCGCCCTACCCGGGCCCCCCGCGGCCCTGGCCCTCGGCGCGCG GGGACTCAATTAAACCCGCCCGGAGACCACGCCGGGCCCAGCG

 $\tt CTATTTTGGTGGATAGGTGGGAGGGAGCAAGGGGAGTTTGAGGGAATCAGAGCTTGATGCTACTGTACAGAACTG$ GACAGGTTGGGCCGGCAGTGGTGGGGCCAGAGGGCTCTGTGCTCTAGGAGCTAAGCCAGCAGCCCCCGAGAGGGG ${\tt ACTTGGCTGGGCCTTTCCTATGGGCAAGGCCCAGTGCTCTTCCTGCCCACCAGGGACCATGGAGCAGTGGCACCC}$ ${\tt CAGCACAGCTACCTCTGGTGGCAGGAGAAGAGAGGCCCAGCACAGCAGGCCAGGCCAGGCCTTCCTGTCCAGGTCTG}$ GGGACAGGCCTCACCCAAGGCCAAGGCTGGCATCAGCCAATCATTCAGAGCTGAGGCCCTGGGCCTAGCCTGCCC TTCTCAGGTGCCAATACCACCCCAGCCCTGCCCTTGGCCTCACTTTTTCCCAGCAATAAGTGGGGTTCACCACCC GCCTCGGGAATACTTTCCCCTTCTAAATGGGACTTGCTGTTACCTCAGGAGGCTCCTTAGTGCAAATATGACCCT GGTCAGGGCTTTGCCACCGTTGAAGCCCTGCAGAAGGTGCAATGTAGGGGTTCTGGGGCCACAGAGGAGAGGCCA $\tt CTTCCCACCAGGACCCCCAACA{\color{red}{\textbf{TGA}}} A \tt GTCTAGGCCTCAGGGGCTCCCGCCCTTCTTCCTCCAGCAGCGGGAACTG$ $\tt CCACTGCTCTCCCAGGCCCTGTTCTGGAGGCTAACCTTGGTTCCTGGAGAGTGTGCCCCTCCACCCTCCAGGCCTAACCTTGGTTCCTGGAGAGTGTGCCCCTCCACCCTCCAGGCCTAACCTTGGTTCCTGGAGAGTGTGCCCCTCCACCCTCCAGGCCTAACCTTGGTTCCTGGAGAGTGTGCCCCTCCACCCTCCAGGCCTAACCTTGGTTCCTGGAGAGTGTGCCCCTCCACCCTCCAGGCCTAACCTTGGTTCCTGGAGAGTGTGCCCCTCCACCCTCCAGGCTAACCTTGGTTCCTGGAGAGTGTGCCCCTCCACCCTCCAGGCTAACCTTGGTTCCTGGAGAGTGTGCCCCTCCACCCCTCCAGGCTAACCCTTGGTTCCTGGAGAGTGTGCCCCTCCACCCCTCCAGGCTAACCTTGGTTCCTGGAGAGTGTGCCCCTCCACCCCTCCAGGCTAACCTTGGTTCCTGGAGAGTGTGCCCCTCCACCCCTCCAGGCTAACCTTGGTTCCTGGAGAGTGTGCCCCTCCACCCCTCCAGGCTAACCTTGGTTCCTGGAGAGTGTGCCCCTCCACCCCTCCAGGCTAACCTTGGTTCCTGGAGAGTGTGCCCCTCCACCCCTCCAGGCTAACCTTGGTTCCTGGAGAGTGTGCCCCTCCAACCCCTCCAGGCTAACCTTCAGGTTCCTGGAGAGAGTGTGCCCCTCCAACCCCTCCAGGCTAACCTTGGTTCCTGGAGAGTGTGCCCCTCCAACCCCTCCAACCCCTCCAGGCTAACCTTGGTTCCTGGAGAGTGTGCCCCTCCAACCCCTCCAGGCTAACCCTTGGTTCAGGTTTCAGGTTTCAGGTTTCAGGTTTCAGGTTTCAGGTTCAGGTTCAGGTTCAGGTTTCAGGTTTCA$ ${\tt AAGCCCTCACCCCACAAGGGGCAGGTGGGGGCTTGGTTGCTGACCCGGCCCAAGTCCCCACAGAGCACCTTCTGT}$ AGCTCCAGCTTGTCTCCCTGG

MAQSYPGSVSASSTATSGGRRREAQHSSRPGLPVQVCMEHSVTQSRDWRHPQPCPRPQQDRPGQASPKAKAGISQ SFRAEALGLACPSQVPIPPQPCPWPHFFPAISGVHHPPREYFPLLNGTCCYLRRLLSANMTLVRALPPLKPCRRC NVGVLGPQRRGHFPPGPPT

FIGURE 1234

CTGCAGACGAGGCAGGCGGAAGAGGCGGGACTTCGCGGGTGACGTCATCGGGGCGCCGGAGGCCCGGGGCGCCTG GGAATTTGAAGCAAACAGGCAGCGCGACAATGGCGGTCGCTCGTGCAGCTTTGGGGCCATTGGTGACGGGTCT GTACGACGTGCAGGCTTTCAAGTTTGGGGACTTCGTGCTGAAGAGCGGGCTTTCCTCCCCCATCTACATCGATCT GCGGGGCATCGTGTCTCGACCGCGTCTTCTGAGTCAGGTTGCAGATATTTTATTCCAAACTGCCCAAAATGCAGG ${\tt CATCAGTTTTGACACCGTGTGGGAGTGCCTTATACAGCTTTGCCATTGGCTACAGTTATCTGTTCAACCAATCA}$ AATTCCAATGCTTATTAGAAGGAAAGAAACAAAGGATTATGGAACTAAGCGTCTTGTAGAAGGAACTATTAATCC AGGAGAAACCTGTTTAATCATTGAAGATGTTGTCACCAGTGGATCTAGTGTTTTTGGAAACTGTTGAGGTTCTTCA GAAGGAGGGCTTGAAGGTCACTGATGCCATAGTGCTGTTGGACAGAGAGCAGGGAGGACGAAGTTGCAGGC GCACGGGATCCGCCTCCACTCAGTGTGTACATTGTCCAAAATGCTGGAGATTCTCGAGCAGCAGAAAAAAGTTGA TGCTGAGACAGTTGGGAGAGTGAAGAGGTTTATTCAGGAGAATGTCTTTGTGGCAGCGAATCATAATGGTTCTCC CCTTTCTATAAAGGAAGCACCCAAAGAACTCAGCTTCGGTGCACGTGCAGAGCTGCCCAGGATCCACCCAGTTGC GCTGTTGCAGCTAGCAGATGCTTTAGGACCTAGTATCTGCATGCTGAAGACTCATGTAGATATTTTGAATGATTT TACTCTGGATGTGATGAAGGAGTTGATAACTCTGGCAAAATGCCATGAGTTCTTGATATTTGAAGACCGGAAGTT TGCAGATATAGGAAACACAGTGAAAAAGCAGTATGAAGGAGGTATCTTTAAAATAGCTTCCTGGGCAGATCTAGT TGAGGAGCACTCTGAATTTGTTGTTTGTTTATTTCTGGCTCCCGAGTAAGCATGAAACCAGAATTTCTTCACTT GACTCCAGGAGTTCAGTTGGAAGCAGGAGGAGATAATCTTGGCCAACAGTACAATAGCCCACAAGAAGTTATTGG CAAACGAGGTTCCGATATCATCATTGTAGGTCGTGGCATAATCTCAGCAGCTGATCGTCTGGAAGCAGCAGAGAT GTACAGAAAAGCTGCTTGGGAAGCGTATTTGAGTAGACTTGGTGTTTTGAGTGCTTCAGATACATTTTTCAGATAC TTCTTCCACAGGGCCTGTGTAAGAATGGGTTCTGGAGTTCTCATGGTCTTTAGGAAATATTGAGTAATTTGTAAT TATTTATTTTTTAATTTTTTTCGAGACAGGATCTCACTCTGTTGCCCAGGATGGAGTGCAGTGGTGAGATCACGG ACCACGTCCATCTAAATTTCTTTATTATTTGTAGAGATGAGGTCTTGCCATGTTACCCAGGCTGGTCTCAACTCC TGGGCTCAAGCGATCCTCCTGCCTCAGTCTCTCAAAGTGCTGGGATTACAGGTGTGAGCCACTGTGCCCAGCCTA ATTGCAGTAAGACAAAAATTCTAGGGCACCAAGAGGCTAAAGTCAGCACAGCTTTTCTTGTGTCCTGTATT

MGSTESSEGRRVSFGVDEEERVRVLQGVRLSENVVNRMKEPSSPPPAPTSSTFGLQDGNLRAPHKESTLPRSGSS GGQQPSGMKEGVKRYEQEHAAIQDKLFQVAKREREAATKHSKASLPTGEGSISHEEQKSVRLARELESREAELRR RDTFYKEQLERIERKNAEMYKLSSEQFHEAASKMESTIKPRRVEPVCSGLQAQILHCYRDRPHEVLLCSDLVKAY QRCVSAAHKG

GAGAGTGGCCAGCGAGGGCAGCGTTCGCCGCCCCTCAGGCCCGGTCCCGGCGCGCAGCCGCCTGCGTTTCGGTT TGTGAGCAGGCCGGGCCGGGCCAGGAGCGAGACTCTGGAGCGGTCGCCGCAGTCGCCCGGGCCGGG AAAGGCGGGCGATGCCCCCAACCGCCGCTCGGGCCATGTCCGAGGGGCGCGCGTGTTGTCGCCGCCGGGGCGCCC TGCCCGCCTGTCGTCCCCGGGCCCAGCCGCTCGTCCGAGGCCCGCGAGGAGCTGCGCCGCCACCTCGTGGGCCT CATCGAGCGCAGCCGGGTGGTGATCTTCAGCAAGAGCTACTGTCCCCATAGTACTCGGGGTGAAAGAACTCTTTTC TTCTTTGGGAGTCGAATGTAATGTCTTGGAACTTGATCAAGTTGATGATGGGGCCAGGGTTCAAGAAGTGCTGTC AGAAATCACTAATCAGAAAACTGTGCCCAATATTTTCGTGAATAAAGTGCATGTAGGTGGATGTACCAAACTTT ${\tt CCAGGCATATCAGAGTGGTTTGTTACAGAAGCTCCTTCAGGAAGATTTGGCATATGATTATGATCTCATCAT}$ $\tt CGGTGGTGGTTCTGGAGGCCTTTCATGTGCGAAGGAAGCTGCCATTTTGGGAAAGAAGTTATGGTGCTAGACTT$ TGTTGTCCCGTCACCTCAGGGCACATCCTGGGGTCTTGGTGGCACTTGTGTAAATGTAGGTTGTATTCCTAAGAA ATTGATGCATCAGGCTGCCCTTTTGGGGCAGGCATTATGTGACTCAAGGAAATTTGGCTGGGAATATAATCAACA AGTGAGGCACAACTGGGAGACAATGACAAAAGCGATTCAGAACCACATCAGCTCTCTAAACTGGGGCTACAGGTT GTCTCTGAGGGAAAAGGCTGTGGCCTATGTCAATTCCTATGGAGAATTTGTTGAACATCATAAAATAAAGGCAAC CAATAAAAAAGGACAGGAGACTTATTATACTGCTGCACAGTTTGTCATAGCAACGGGTGAAAGGCCACGGTATTT AGGAATCCAAGGAGATAAAGAATACTGTATTACTAGTGATGACCTTTTTTCTCTGCCTTATTGCCCTGGCAAAAC TATGGTACGCTCAATCCTTCTCCGTGGCTTCGACCAAGAAATGGCAGAAAAAGTGGGTTCCTACATGGAGCAGCA TGGTGTGAAGTTCCTACGGAAATTCATACCTGTGATGGTTCAACAGTTGGAGAAAGGTTCACCTGGAAAGCTGAA ${\tt AGTGTTGGCTAAATCCACTGAAGGAACAGAAACAATTGAAGGAGTCTATAACACAGTTTTGTTAGCTATTGGTCG}$ TGACTCCTGTACAAGGAAAATAGGCTTGGAGAAGATTGGTGTCAAAATTAATGAGAAGAGTGGAAAAATACCTGT AAATGATGTGGAACAGACCAATGTGCCATATGTCTATGCTGTTGGTGATATTTTGGAGGATAAGCCAGAGCTCAC TCCTGTCGCCATACAGTCAGGCAAGCTGCTAGCTCAGAGACTTTTTGGGGCCCTCTTTAGAAAAGTGTGATTATAT TAATGTTCCGACTACAGTGTTTACTCCTCTGGAGTATGGTTGCTGTGGATTATCTGAAGAGAAAGCTATTGAAGT ATATAAAAAAGAGAATCTAGAAATATATCATACTTTGTTCTGGCCTCTTGAATGGACAGTAGCTGGCAGAGAGAA CAACACTTGTTATGCAAAGATAATCTGCAATAAATTCGACCATGATCGGGTGATAGGATTTCATATTCTTGGACC AAACGCCGGTGAGGTTACCCAAGGATTTGCAGCTGCAATGAAATGTGGGCTCACAAAACAGCTACTTGATGACAC CATTGGAATTCACCCCACATGTGGGGAGGTGTTCACGACTTTGGAAATCACAAAGTCGTCAGGACTAGACATCAC TCAGAAAGGCTGCTGAGGCTAGGCCTGCTGTTTAGTTCTCCTTGTCATATTCTCATTTCTCTCAAAGATAAG AATGCTCTCGGATAAAATGAGCCTGTGCTCATGACAGCTGCTCTGTTACTCAGGGACCAGTGCAGGGCTGTCTTA GAAGCAGTGGGACTGCTTCCTTGACGCCTTAGCTTGGAGCCCGTTATGAGGTGAGCCAAGGCTGACTCTCGCAA GCCAGGACTGAGCTTCCCTCGGAAAGACCTTTGAGTGGCACCATTCACCTAAGTTAGCTTTTCTGGTCGCTATTG TTTTTATCCCCTTTGCTTTGTTGTTCTGTGAAAATATATTTTCAGTTAAGAAATGCTATAAAGTAGTGGTTTTC TAGTGCGTGGGCCTAGAATTCACACATGCTCACTGGTGAACAGTGTCTGTGGGCTGCTGTGGGCTGCATTTGGAT $^{\circ}$ AGCTGTCTGCATTAGCAGGAAGCTGTACACACTGTGTAGGGTTAGTCATCTCTTTTCTTTTTTGAGGCACATTTA CCCCTAATTAATATCTCGAGACTGAGCAAAATATCTCATGTAAGATAAAAGTACTTGAATTGCTTTTTCATGTTC TCCATCACAGTCTGTTTAATGATGATAAAGTTCCATAAATGAATACAGGT

PCT/US2003/028547

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1330/6881 FIGURE 1238A

CTCTCGGCGGAGCTGCTGTGCAGTGGAACGCGCTGGGCCGCGGGCAGCGTCGCCTCACGCGGAGCAGAGCTGAGC TGAAGCGGGACCCGGAGCCCGAGCAGCCGCCGCCATCGCAATCAAATTTCTGGAAGTCATCAAGCCCTTCTGTGT CATCCTGCCGGAAATTCAGAAGCCAGAGAGAGAGATTCAGTTTAAGGAGAAAGTGCTGTGGACCGCTATCACCCT CTTTATCTTCTTAGTGTGCTGCCAGATTCCCCTGTTTGGGATCATGTCTTCAGATTCAGCTGACCCTTTCTATTG GATGAGAGTGATTCTAGCCTCTAACAGAGGCACATTGATGGAGCTAGGGATCTCTCCTATTGTCACGTCTGGCCT TATAATGCAACTCTTGGCTGGCGCCAAGATAATTGAAGTTGGTGACACCCCAAAAGACCGAGCTCTCTTCAACGG AGCCCAAAAGTTATTTGGCATGATCATTACTATCGGCCAGTCTATCGTGTATGTGATGACCGGGATGTATGGGGA CCCTTCTGAAATGGGTGCTGGAATTTGCCTGCTAATCACCATTCAGCTCTTTGTTGCTGGCTTAATTGTCCTACT TTTGGATGAACTCCTGCAAAAAGGATATGGCCTTGGCTCTGGTATTTCTCTCTTCATTGCAACTAACATCTGTGA AACCATCGTATGGAAGGCATTCAGCCCCACTACTGTCAACACTGGCCGAGGAATGGAATTTGAAGGTGCTATCAT CGCACTTTTCCATCTGCTGGCCACACGCACAGACAAGGTCCGAGCCCTTCGGGAGGCGTTCTACCGCCAGAATCT TCCCAACCTCATGAATCTCATCGCCACCATCTTTGTCTTTGCAGTGGTCATCTATTTCCAGGGCTTCCGAGTGGA CCTGCCAATCAAGTCGGCCCGCTACCGTGGCCAGTACAACACCTATCCCATCAAGCTCTTCTATACGTCCAACAT CCCCATCATCCTGCAGTCTGCCCTGGTGTCCAACCTTTATGTCATCTCCCAAATGCTCTCAGCTCGCTTCAGTGG CAACTTGCTGGTCAGCCTGCTGGGCACCTGGTCGGACACGTCTTCTGGGGGCCCAGCACGTGCTTATCCAGTTGG TGGCCTTTGCTATTACCTGTCCCCTCCAGAATCTTTTGGCTCCGTGTTAGAAGACCCGGTCCATGCAGTTGTATA CATAGTGTTCATGCTGGGCTCCTGTGCATTCTTCTCCAAAACGTGGATTGAGGTCTCAGGTTCCTCTGCCAAAGA TGTTGCAAAGCAGCTGAAGGAGCAGCAGATGGTGATGAGAGGCCCACCGAGAGACCTCCATGGTCCATGAACTCAA CCGGTACATCCCCACAGCCGCGCCTTTGGTGGGCTGTGCATCGGGGCCCTCTCGGTCCTGGCTGACTTCCTAGG CGCCATTGGGTCTGGAACCGGGATCCTGCTCGCAGTCACATCATCTACCAGTACTTTGAGATCTTCGTTAAGGA GCAAAGCGAGGTTGGCAGCATGGGGGCCCTGCTCTTCTGAGCCCGTCTCCCGGACAGGTTGAGGAAGCTGCTCCA GAAGCGCCTCGGAAGGGGAGCTCTCATCATGGCGCGTGCTGCTGCGGCATATGGACTTTTAATAATGTTTTTTGAA TTTCGTATTCTTTCATTCCACTGTGTAAAGTGCTAGACATTTTCCAATTTAAAATTTTGCTTTTTATCCTGGCAC TGGCAAAAAGAACTGTGAAAGTGAAATTTTATTCAGCCGACTGCCAGAGAAGTGGGAATGGTATAGGATTGTCCC CAAGTGTCCATGTAACTTTTGTTTTAACCTTTGCACCTTCTCAGTGCTGTATGCGGCTGCAGCCGTCTCACCTGT TTCCCCACAAAGGGAATTTCTCACTCTGGTTGGAAGCACAAACACTGAAATGTCTACGTTTCATTTTGGCAGTAG GGTGTGAAGCTGGGAGCAGATCATGTATTTCCCGGAGACGTGGGACCTTGCTGGCATGTCTCCTTCACAATCAGG CGTGGGAATATCTGGCTTAGGACTGTTTCTCTCTAAGACACCATTGTTTTCCCTTATTTTAAAAGTGATTTTTTT AAGGACAGAACTTCTTCCAAAAGAGAGGGATGGCTTTCCCAGAAGACACTCCTGGCCATCTGTGGATTTGTCTGT GCACCTATTGGCTCTTCTAGCTGACTCTTCTGGTTGGGCTTAGAGTCTGCCTGTTTTCTGCTAGCTCCGTGTTTAG TCCACTTGGGTCATCAGCTCTGCCAAGCTGAGCCTGGCCAAGCTAGGTGACAGACCCTTGCAGTGATGTCCGTT TGTCCAGATTCTGCCAGTCATCACTGGACACGTCTCCTCGCAGCTGCCCTAGCAAGGGGAGACATTGTGGTAGCT ATCAGACATGGACAGAAACTGACTTAGTGCTCACAAGCCCCTACACCTTCTGGGCTGAAGATCACCCAGCTGTGT TCAGAATTTTCTTACTGTGCTTAGGACTGCACGCAAGTGAGCAGCACCACCGACTTCCTTTCTGCGTCACCAGT GTCGTCAGCAGAGAGAGAGCACAGGCTCAAGGTTGGTAGTGAAGTCAGGTTCGGGGTGCATGGGCTGTGGTG GTGTTGATCAGTTGCTCCAGTGTTTGAAATAAGAAGACTCATGTTTATGTCTGGAATAAGTTCTGTTTGTGCTGA CAGGTGGCCTAGGTCCTGGAGATGAGCACCCTCTCTCTGGCCTTTAGGGAGTCCCCTCTTAGGACAGGCACTGCC CAGCAGCAAGGGCAGCAGAGTTGGGTGCTAAGATCCTGAGGAGCTCGAGGTTTCGAGCTGGCTTTAGACATTGGT CCCCACTCTGACAGTGGGCACACGGCAGCCTGCAAAGCACAGGGCCACCGCCACAGCCCGGCAGAGGGGCACACT CTGGAGACCTTGCTGGCAGTGCTAGCCAGGAAACAGAGTGACCAAGGGACAAGAAGGGACTTGCCTAAAGCCACC CAGCAACTCAGCAGCAGCACCAAGATGGGCCCCAGGCTTCCATATGGCCCCAGGGCTTACCACCCTATCACACG TGGCCTTGTCTAGACCCAGTCCTGAGCAGGGGAGAGGCTCTTGAGACCTGATGCCCTCCTACCCACATGGTTCTC GCAGGCAGCCAGCTGTACCCAAGCTGGTGGGCAGGGGGCTGGAAGGCACCAGGCCTCAGGAGGAGCCCCATAGTC CCGCCTGCAGCCTGTAACCATCGGCTGGGCCCTGCAAGGCCCACACTCACGCCCTGTGGGTGATGGTCACGGTGG GTGGGTGGGGCTGACCCCAGCTTCCAGGGGACTGTCACTGTGGACGCCAAAATGGCATAACTGAGATAAGGTGA

1331/6881 FIGURE 1238B

MAIKFLEVIKPFCVILPEIQKPERKIQFKEKVLWTAITLFIFLVCCQIPLFGIMSSDSADPFYWMRVILASNRGT LMELGISPIVTSGLIMQLLAGAKIIEVGDTPKDRALFNGAQKLFGMIITIGQSIVYVMTGMYGDPSEMGAGICLL ITIQLFVAGLIVLLLDELLQKGYGLGSGISLFIATNICETIVWKAFSPTTVNTGRGMEFEGAIIALFHLLATRTD KVRALREAFYRQNLPNLMNLIATIFVFAVVIYFQGFRVDLPIKSARYRGQYNTYPIKLFYTSNIPIILQSALVSN LYVISQMLSARFSGNLLVSLLGTWSDTSSGGPARAYPVGGLCYYLSPPESFGSVLEDPVHAVVYIVFMLGSCAFF SKTWIEVSGSSAKDVAKQLKEQQMVMRGHRETSMVHELNRYIPTAAAFGGLCIGALSVLADFLGAIGSGTGILLA VTIIYQYFEIFVKEQSEVGSMGALLF

MVDRLRPVKFPLLMGQPEAQGQPGPAGAPGQRATLAAAETEIRGVTARSGAGHQAPSPAGLLAAAGPFSALPEAE FPEREAAGPRGSREQPGREDVGSRHPRLGTAAFQQPLAFIEPLSSPARRSRGESHATAEETEAGRVTHSPVVAGG RPGCHRAEDRPLCQPGGVGQDSRALARAQSPTLPRSCRWSGDFVQGREPEEEARLAAGQLAHGTWGVMTPAFMER LLCALQVSNVRLREEKQKARRLEWVRHPSGAWHEYDSSLTQSPGGMSAGAIAGTRTQA

 ${\tt AGGTAAAGGGAAGAAGAAGAAGAAGAACAATTTGGAAGTACGTGAAACCAAAATTAAGGGTAAAAGTGGGAGAT}$ TCTTCACAGTCAAGCTCCCAGTTGCTCTTGATCCTGGGGCCAAGATTTCAGTCATTGTGGAAACAGTCTACACCC ATGTGCTTCATCCATATCCAACCCAGATCACCCAGTCAGAGAAACAGTTTGTGGTGTTTGAGGGGAACCATTATT TCTACTCTCCCTATCCAACGAAGACACAAACCATGCGTGTGAAGCTTGCCTCTCGAAATGTGGAGAGCTACACCA ATACTTTTAAAGTACATTATGAGAACAACAGCCCTTTCCTGACCATCACCAGCATGACCCGAGTCATTGAAGTCT $\tt CTCACTGGGGTAATATTGCTGTGGAAGAAAATGTGGACTTAAAGCACACAGGAGCTGTGCTTAAGGGGGCCTTTCT$ CTGCCCAGGATGTTTATTACCGGGATGAGATTGGCAATGTTTCTACCAGCCACCTCCTTATTTTGGATGACTCTG TAGAGATGGAAATCCGGCCTCGCTTCCCTCTCTTTGGCGGGTGGAAGACCCATTACATCGTTGGCTACAACCTCC CAAGCTATGAGTACCTCTATAATTTGGGTGACCAGTATGCACTGAAGATGAGGTTTGTGGACCATGTGTTTGATG ATGAAATCAGCCGTGCCCCAGATGAGCTGCACTACACCTATCTGGATACATTTGGCCGCCCTGTGATTGTTGCCT ACAAGAAAAATCTGGTAGAACAGCACATTCAGGACATTGTGGTCCACTACACGTTCAACAAGGTGCTCATGCTGC ${\tt AGGAGCCCTGCTGGTGGTGGCGGCCTTCTACATCCTGTTCTTCACCGTTATCATCTATGTTCGGCTGGACTTCT}$ ${\tt ACAAGAGAATAGGCCTTTACCGTCACTTGACGAGACCGTCAATAGGTACAAGCAATCCCGGGACATCTCCACCC}$ TGAAGACAGAGGCTCTGATCTGTGCGACAGAGTGAGCGAAATGCAGAAGCTGGATGCACAGGTCAAGGAGCTGG AGCTCATCTCAGGAAAGCGCCAGGAGCTGGTCACCAAGATCGACCACATCCTGGATGCCCTGTAGCCCCTGCCCG GAGGCCAGTGAAAGCTGACATCTGTAAAAGGCCTTCAAGGAAGAAACCAGGCCCTGCGTCAGGCAGTGTGAGT TTGCCGTTTGTCCTTAACTTTCTTTTTTTTTTTTAAAAAAAGAAAACTTTAAAAAAACTCCCATTAAAAAACA AAACATCTTTGTGTTTTGAACAAAGGAATTTTCAATATTTGATTGGTATTCTGTTCTGAAGTCTAGGATATTTTT CAGCCTATAAAGCCCCCTGTTTTATGCCCTTCTAATTCTGATGTTTGGGTATTGTGTGAGTGCATGTGTTTTTTT TTTTTTTTTTTAAAGCGTGTGTGAACAAATGGAAATAAAGCAGGGACTGTG

CTGCTCTTCCCGGTCATGGAGGCGCCAGCCGCCTGTTTCTGCTCCTGTTGCTTGGGACTTGGGCCCCGGCG CCGGGCAGCGCCTCCTCCGAGGCACCGCCGCTGATCAATGAGGACGTGAAGCGCACAGTGGACCTAAGCAGCCAC $\verb|CTGGCTAAGGTGACGGCCGAGGTGGTCCTGGCGCACCTGGGCGGCGGCTCCACGTCCCGAGCTACCTCTTTCCTG|$ CTGGCTTTGGAGCCTGAGGCCCGGCTGGCGCACCTGGGCGTGCAGGTAAAGGGAAGATGAGGAAGATGA AACAATTTGGAAGTACGTGAAACCAAAATTAAGGGTAAAAGTGGGAGATTCTTCACAGTCAAGCTCCCAGTTGCT CTTGATCCTGGGGCCAAGATTTCAGTCATTGTGGAAACAGTCTACACCCATGTGCTTCATCCGTATCCAACCCAG ATCACCCAGTCAGAGAAACAGTTTGTGGTGTTTGAGGGGGAACCATTATTTCTACTCTCCCTATCCAACGAAGACA CAAACCATGCGTGTGAAGCTTGCCTCTCGAAATGTGGAGAGCTACACCAAGCTGGGGAACCCCACGCGCTCTGAG AACAGCCCTTTCCTGACCATCACCAGCATGACCCGAGTCATTGAAGTCTCTCACTGGGGTAATATTGCTGTGGAA GAAAATGTGGACTTAAAGCACACAGGAGCTGTGCTTAAGGGGCCTTTCTCACGCTATGATTACCAGAGACAGCCA GAGATTGGCAATGTTTCTACCAGCCACCTCCTTATTTTGGATGACTCTGTAGAGATGGAAATCCGGCCTCGCTTC CCTCTCTTTGGCGGGTGGAAGACCCATTACATCGTTGGCTACAACCTCCCAAGCTATGAGTACCTCTATAATTTG GGTGACCAGTATGCACTGAAGATGAGGTTTGTGGACCATGTGTTTGATGAACAAGTGATAGATTCTCTGACTGTG AAGATCATCCTGCCTGAAGGAGCCAAGAACATTGAAATTGATAGTCCCTATGAAATCAGCCGTGCCCCAGATGAG $\tt CTGCACTACCCTATCTGGACACATTTGGCCGCCCTGTGATTGTTGCCTACAAGAAAAATCTGGTAGAACAGCAC$ ATTCAGGACATTGTGGTCCACTACACGTTCAACAAGGTGCTCATGCTGCAGGAGCCCCTGCTGGTGGTGGCGGCC TTCTACATCCTGTTCTTCACCGTTATCATCTATGTTCGGCTGGACTTCTCCATCACCAAGGATCCAGCCGCAGAA GCCAGGATGAAGGTAGCCTGCATCACAGAGCAGGTCTTGACCCTGGTCAACAAGAGAATAGGCCTTTACCGTCAC TTTGACGAGACCGTCAATAGGTACAAGCAATCCCGGGACATCTCCACCCTCAACAGTGGCAAGAAGAGCCTGGAG ACTGAACACAAGGCCTTGACCAGTGAGATTGCACTGCTGCAGTCCAGGCTGAAGACAGAGGGCTCTGATCTGTGC GACAGAGTGAGCGAAATGCAGAAGCTGGATGCACAGGTCAAGGAGCTGGTGCTGAAGTCGGCGGTGGAGGCTGAG CGCCTGGTGGCTGGCAAGCTCAAGAAAGACACGTACATTGAGAATGAGAAGCTCATCTCAGGAAAGCGCCAGGAG CTGGTCACCAAGATCGACCACATCCTGGATGCCCTGTAGCCCCTGCCCGCATCCTCCAGGGGGCCCAGGGTGCCT GCACTTTGCTGTGGCAGGCAGATTGGGTGGTAGTGGGAGGTTGTGCATGGAGGCCAGTGAAAGCTGACATCTGTA AATTTCAATATTGATTGGTATTCTGTTCTGAAGTCTAAGATATTTTTCAGCCTATAAAGCCCCCTGTTTTATG AATGGAAATAAAGCAGGGACTGTG

CATCCATCCTAGCAGGGCCCCGTCGCCCACCAGGCGGACAAAAGCGGTCCGCTGAACACCATGCGGCCGCTCGGC TCTGCACCCAGACCCTGAGCCGCCGCCGGCCATGGAGGTGGCGCCCGAGCAGCCGCGCTGGATGGCGCACCC GGCCGTGCTGAATGCGCAGCACCCCGACTCACACCACCCGGGCCTGGCGCACAACTACATGGAACCCGCGCAGCT GCTGCCTCCAGACGAGGTGGACGTCTTCTTCAATCACCTCGACTCGCAGGGCAACCCCTACTATGCCAACCCCGC TCACGCGCGGGCGCGCTCTCCTACAGCCCCGCGCAGCCCGCCTGACCGGAGGCCAGATGTGCCGCCCACACTTG TTGCACAGCCCGGGTTTGCCCTGGCTGGACGGGGCCAAAGCAGCCCTCTCTGCCGCTGCGGCCCACCACCACAAC CACTCTGGCTCCCACCTTTTCGGCTTCCCACCCACGCCACCCAAGAAGTGTCTCCTGACCCTAGCACCACGGGG GCTGCGTCTCCAGCCTCATCTTCCGCGGGGGGTAGTGCAGCCCGAGGAGAGACAAGGACGGCGTCAAGTACCAG GTGTCACTGACGGAGAGCATGAAGATGGAAAGTGGCAGTCCCCTGCGCCCAGGCCTAGCTACTATGGGCACCCAG CCTGCTACACCACCCCATCCCCACCTACCCCTCCTATGTGCCGGCGGCTGCCCACGACTACAGCAGCGGACTC TTCCACCCGGAGGCTTCCTGGGGGGACCGGCCTCCAGCTTCACCCCTAAGCAGCGCAGCAAGGCTCGTTCCTGT CTGTGCAATGCCTGTGGCCTCTACCACAAGATGAATGGGCAGAACCGACCACTCATCAAGCCCAAGCGAAGACTG TCGGCCGCCAGAAGAGCCGGCACCTGTTGTGCAAATTGTCAGACGACAACCACCACCTTATGGCGCCGAAACGCC AACGGGGACCCTGTCTGCAACGCCTGTGGCCTCTACTACAAGCTGCACAATGTTAACAGGCCACTGACCATGAAG GTGGGCCACCTCCGGCCCTTCAGCCACTCCGGACACATCCTGCCCACTCCGACGCCCATCCACCCCTCCTCCAGC CTCTCCTTCGGCCACCCCACCCGTCCAGCATGGTGACCGCCATGGGCTAGGGAACAGATGGACGTCGAGGACCG GGCACTCCCGGGATGGGTGGACCAAACCCTTAGCAGCCCAGCATTTCCCGAAGGCCGACACCACTCCTGCCAGCC CGGCTCGGCCCAGCACCCCCTCTCCTGGAGGGCGCCCCAGCAGCCTGCCAGCAGTTACTGTGAATGTTCCCCACCG GGACAACTTTATGTAGAGAAAAGGAGGGACGGGACAGACGAAGGCAACCATTTTTAGAAGGAAAAAGGATTAGG CAAAAATAATTTATTTTGCTCTTGTTTCTAACAAGGACTTGGAGACTTGGTGGTCTGAGCTGTCCCAAGTCCTCC TCTTCTCCTCTGGCTTCCCTCTCTGAAATAGCCGAACTCCAGGCTGAGCCAAAGCCAGAGTGGCCACGGC CAGATTCCCAGGCCAGGGCTGGGTCACAGGAAGGAAACAACATTTTCTTGAAAGGGGAAACGTCTCCCAGATCGC TCCCTTGGCTTTGAGGCCGAAGCTGCTGTGACTGTTCCCCTTACTGAGCGCAAGCCACAGCCTGTCTTGTCAGG TGGACCCTGTAAATACATCCTTTTTCTGTTAACCCTTCAACCCCTCGCCTACTACTCTGAGAC

FIGURE 1245

GGCACGAGGATAAAGCCTGAGGCGGCGGCAGCGGCGGAGTTGGCGGCTTGGAGAGCTCGGGAGAGTTCCCTGGAA CCAGAACTTGGACCTTCTCGCTTCTGTCCTCCGTTTAGTCTCCTCCTCGGCGGGAGCCCTCGCGACGCGCCCGGC ${\tt CCGGAGCCCCAGCGCAGCGCCGCGTTTGAAGGATGACCTCTAGGAAGAAAGTGTTGCTGAAGGTTATCATCCT}$ GGGAGATTCTGGAGTCGGGAAGACATCACTCATGAACCAGTATGTGAATAAGAAATTCAGCAATCAGTACAAAGC CACAATAGGAGCTGACTTTCTGACCAAGGAGGTGATGGTGGATGACAGGCTAGTCACAATGCAGATATGGGACAC AGCAGGACAGGAACGGTTCCAGTCTCCGGTGTGGCCTTCTACAGAGGTGCAGACTGCTGCGTTCTGGTATTTGA TCCTGAAAACTTCCCATTTGTTGTGTTGGGAAACAAGATTGACCTCGAAAACAGACAAGTGGCCACAAAGCGGGC ACAGGCCTGGTGCTACAGCAAAAACAACATTCCCTACTTTGAGACCAGTGCCAAGGAGGCCATCAACGTGGAGCA GGCGTTCCAGACGATTGCACGGAATGCACTTAAGCAGGAAACGGAGGTGGAGCTGTACAACGAATTTCCTGAACC TATCAAACTGGACAAGAATGACCGGGCCAAGGCCTCGGCAGAAAGCTGCAGTTGCTGAGGGGGGCAGTGAGAGTTG ATACATTGATCTCTCACATCCAGCTGCCAAAAGAAAACCCCATCAAACACAGTTACACCCCACATATCTCGCACA CACACACACACACACACACACACACACACAGATCTGACGTAATCAAACTCCAGCCCTTGCCCGTGATGGCTCCTT GGGGTCTGCCTGCCCACCCACATGAGCCCGCGAGTATGGCAGCAGGACAAGCCAGCGGTGGAAGTCATTCTGATA TGTTAATGCTTGTTACTTTTAACTAATCAGATCTTTTTACAGTATCCATTTATTATGTAATGCTTCTTAGAAAAG

MSFSSRPVPEILKTSHLLCWETRLTSKTDKWPQSGHRPGATAKTTFPTLRPVPRRPSTWSRRSRRLHGMHLSRKR RWSCTTNFLNLSNWTRMTGPRPRQKAAVAEGAVRVEHRVLHKPRTHVGLQHNSPLLFQTKHTLISHIQLPKENPI KHSYTPHISHTHTHTHTHTHRSDVIKLQPLPVMAPWGLPAHPHEPASMAAGQASGGSHSDMELALEAYSFCSLER ERTVYS

FIGURE 1248

AGAATCTTCAGTTTCTGTGAGCGTCCGCTTCGTCTGGGCACTTCCGGTACTCCCATTCAGTTCCGGTCCCTGTCT TTTACGTTTCCGGCAAAACATCAGTGTCTGTGGGTAGTTGGAATCTTCAGTTCCTGTGAGCGTCGGCGTCTTCTG ${\tt GGCCTGTGGAGTTTCTTGGACAGGGGCCGCGGGGCTCCAGGACGGCGCCCTTAGCGACACC\underline{{\tt ATG}}{\tt GCCCGAAATGC}$ AGAAAAGGCCATGACGGCCTTAGCAAGATTTCGCCAGGCTCAGCTGGAAGAGGGAAAAGTGAAGGAACGAAGACC AAAAGTGGCTCAGATTCAGAATGCTGGTTTAGGTGAATTTCGAATTCGTGACCTGAATGATGAAATTAACAAGCT GCTAAGGGAGAAAGGACACTGGGAGGTCCGGATAAAGGAGCTGGGAGGTCCTGATTATGGAAAAGTTGGCCCTAA ${\tt AATGCTGGATCATGAAGGAAAAGAAGTCCCAGGAAACCGAGGTTACAAGTACTTTGGAGCAGCAAAAGATTTGCC}$ TGGTGTTAGAGAGCTGTTTGAAAAAGAACCTCTTCCTCCTCCCAGAAAGACACGTGCTGAGCTCATGAAGGCAAT ${\tt CGATTTGAGTACTATGGTTACCTAGATGAAGATGATGGTGTTATTGTGCCTTTGGAACAGGAATATGAAAAGAA}$ GGAGGAAGAGGAGGAAGATCAACATCTATGCAGTCACCGAGGAGGAGTCGGACGAGGAAGGCAGCCAGGAGAA ${\tt AGGAGGGGACGACAGCCAGCAGAAGTTCATTGCTCACGTCCCTGTTCCCTCGCAGCAAGAGATTGAGGAGGCACT}$ GGTGCGAAGGAAGAAATGGAACTCCTCCAGAAGTATGCAAGCGAGACCCTGCAGGCCCAAAGTGAAGAAGCCAG TGTTGACCGGAGGGTAGGGTCTGCCCTGGTCTTCCTGGTAGGTTTTGTACACATATTTTGCTACTGTGTGGAT ${\tt CCATTTATTTTTATTGTGGAGTGTATACAACAGGTTGCGAACTGGCTGCCTGTGTCTTATTTTGACTTGCACTGC}$ CATTTTGAGGGGAGAAGAATCAATTAGTGGCAAACATTTAAAAATGCAATTTTTTGCAGACCAAAGTATAATTTT AAAAAATGCAAATTTTCTAAAAGACACATCTCTTGAAAAATGAGATGATGTGGCCAGGCGCAGTGGCTCACGCCT GTAACCCCAGCACTTTGGGAGGCCGAGGCGGGCGGGTCACGAGGTCAAGAGATGGAGACCATCCTGGCCAACATG GTGAAACCCCATGTCTACTAAAAATACAAAAAATTAGCTGGGCGTACTGGCATGCACCTGTAGTCCCAGCTGCT TGGGAGGCTGAGGCAGGAGATCACTTGAACCCGAGAGGTGGAGGTTGAAGTGAGCCAAGATCGTGCCATTGCAC

FIGURE 1249

MARNAEKAMTALARFRQAQLEEGKVKERRPFLASECTELPKAEKWRRQIIGEISKKVAQIQNAGLGEFRIRDLND EINKLLREKGHWEVRIKELGGPDYGKVGPKMLDHEGKEVPGNRGYKYFGAAKDLPGVRELFEKEPLPPPRKTRAE LMKAIDFEYYGYLDEDDGVIVPLEQEYEKKLRAELVEKWKAEREARLARGEKEEEEEEEEINIYAVTEEESDEE GSQEKGGDDSQQKFIAHVPVPSQQEIEEALVRRKKMELLQKYASETLQAQSEEARRLLGY

GAATTCCAAACAGCCTCTACCTTGCGAGCCGTCTTCCCCAGGCCTGCGAGTCTCCGCCGCCGCTGCGGGCCCGC TCCGACGCGGAAGATCTGACTGCAGCCATCAGCAGCAATGAGTGCTTCAAGTGTGGACGATCTGGCCACTGGGCC CGGGAATGTCCTACTGGTGGAGGCCGTGGTCGTGGAATGAGAAGCCGTGGCAGAGGTGGTTTTACCTCGGATAGA GGTTTCCAGTTTGTTTCCTCGTCTCTTCCAGATATTTGTTATCGCTGTGGTGAGTCTGGTCATCTTGCCAAGGAT TGTGATCTTCAGGAGGATGCCTGCTATAACTGCGGTAGAGGTGGCCACATTGCCAAGGACTGCAAGGAGCCCAAG AGAGAGCGAGAGCAATGCTGCTACAACTGTGGCAAACCAGGCCATCTGGCTCGTGACTGCGACCATGCAGATGAG CAGAAATGCTATTCTTGTGGAGAATTCGGACACATTCAAAAAGACTGCACCAAAGTGAAGTGCTATAGGTGTGGT GAAACTGGTCATGTAGCCATCAACTGCAGCAAGACAAGTGAAGTCAACTGTTACCGCTGTGGCGAGTCAGGGCAC $\tt CTTGCACGGGAATGCACAATTGAGGCTACAGCC\underline{TAA}{} TTATTTTCCTTTGTCGCCCCTCCTTTTTCTGATTGATGG$ TTGTATTATTTTCTCTGAATCCTCTTCACTGGCCAAAGGTTGGCAGATAGAGGCAACTCCCAGGCCAGTGAGCTT TTAGTTTGGTAGAGGTGTTATGTATAATGCTTTGTTAAAGAACCCCCTTTCCGTGCCACTGGTGAATAGGGATTG ATGAATGGGAAGAGTTGAGTCAGACCAGTAAGCCCGTCCTGGGTTCCTTGAACATGTTCCCATGTAGGAGGTAAA ACCAATTCTGGAAGTGTCTATGAACTTCCATAAATAACTTTAATTTTAGTATAATGATGGTCTTGGATTGTCTGA CCTCAGTAGCTATTAAATAACATCAAGTAACATCTGTATCAGGCCCTACATAGAACATACAGTTGAGTGGGAGTA AACAAAAGATAAACATGCGTGTTAATGGCTGTTCGAGAGAAATCGGAATAAAAGCCTAAACAGGAACAACTTCA TCACAGTGTTGATGTTGGACACATAGATGGTGATGGCAAAGGTTTAGAACACATTATTTTCAAAGACTAAATCTA AAACCCAGAGTAAACATCAATGCTCAGAGTTAGCATAATTTGGAGCTATTCAGGAATTGCAGAGAAATGCATTTT CACAGAAATCAAGATGTTATTTTTGTATACTATATCACTTAGACAACTGTGTTTCATTTGCTGTAATCAGTTTTT AAAAGTCAGATGGAAAGAGCAACTGAAGTCCTAGAAAATAGAAATGTAATTTTAAACTATTCCAATAAAGCTGGA

MSSNECFKCGRSGHWARECPTGGGRGRGMRSRGRGGFTSDRGFQFVSSSLPDICYRCGESGHLAKDCDLQEDACY NCGRGGHIAKDCKEPKREREQCCYNCGKPGHLARDCDHADEQKCYSCGEFGHIQKDCTKVKCYRCGETGHVAINC SKTSEVNCYRCGESGHLARECTIEATA

CATGGCTGCCCTCAGATCCCTTGTGAAGCCCAAGATCGTCAAAAAGAGAACCAAGAAATTCATCCGGCACCAGTC ${\tt AGCCAGGAAGTGGCCCAGCGCTCTTTATACCACGGGTGCAGGAATTCACACAGAAAAGTGGAGGCCAAGGCGTGA}$ GAATTCCTCAATGACTGCCCTCTAAAGGAAGAGGACCAGGCTTCCTGTCAGAGACTGAGGACCCAGGAAGAAACA TGTCTCGGCCCCTGTCCCCCTCCACAATTCAGAGGCCACATTCTAACAGGGGAGGCTGACCAATTAAACAGATAA TGACACCTCCTAGAGCTAAGAGCTCTCCGACTATGAACCAGATGCCTGGAGAACACGGATGAATGGTCTGAGCAT GAGCAGGGGTGGGAGCAGCGTTAAGGGAGGCATCAGAGTCAGAACCTAGCAAACAAGTGTTTGTGAAGAAGAAT TCATAGAAAAGGGCAATGCGGGCATCACATGGGCTAAGGAACAGAGGGGTAGCAGTAGCTGTTGTGCCAAGCTGC AGGTGTTATACACTACCCTCTAGATCTGGGTTTCCTTAAAACACCTTGAGAGGACAACCCTGCAAAGCACGGCAC AGTGGCCGAGAGGGAAAGGAGCATTCGAGGTCTCAGTCCTCGCTCTGAGCCTACTTCTCTGCTTCTGGGCTCCAG TCTAGGATTTGCCCACTGAGAAATCTGTTTCCAAGTTCCTTCAACCTGATGCATCCTGCAGCATCACGGCAGCTG TTCAGAGTGGTCAGAAGGCCCCTGAATGAGCTCAGTAGAGGGAAGCCTGGGAACAGGGAGGCACCTGCAGCTCTA ${\tt ATTTTTTAGTAGAGTCAGGGTTTTACTTTGGCCAGGCTGGTCTTAAACTCCTGGCCTCAACTGATCTGCCTGTC}$ TCGGCCTCCCAAAGAACTGGGATTACAGGCATGAGGCACCGTGCCTGTCCCATGTTGTACTTAATAGATATTTAC CATATACAATTATTTTTAATTTAAATAAATCAATGAACAGTGTTATTTTTT

 ${\tt MHPAASRQLFRVVRRPLNELSRGKPGNREAPAALLMAWPELSSSSLPSSGDGIPSLGTTLCKLVSLSACHRGKER} \\ {\tt GGIQDLDEIATPTLLSKSSSFFKTSYCTDFFVFLTESCCVTKAGMQWHDLGSL} \\$

GGTGGCGTGGGGACTCCCTGAAAGCAGAGCGGCAGGGCGCCCGGAAGTCGTGAGTCGAGTCTTCCCGGGCTAATC CATGCCGGGTTGGAGGCTGCTGACGCAGGTCGGCCCCAGGTGCTGGGTCGACTCGGGGACGGCCTGGGTGCTGC CCTGGGCCCGGGGAACAGAACACATCTGGCTTTTTGTTAGAGGTCTTCATGGAAAGAGTGGTACATGGTGGGA TGAGCATCTTTCTGAAGAAAATGTCCCATTCATTAAGCAGTTGGTCTCTGATGAAGATAAAGCCCAATTAGCAAG TAAACTGTGTCCTCTGAAAGATGAACCATGGCCTATACATCCTTGGGAACCAGGTTCCTTTAGAGTTGGTCTTAT TGCCTTGAAGCTGGGCATGATGCCTTTATGGACCAAGGATGGTCAAAAGCATGTGGTCACATTACTTCAGGTACA AACTGTATCACGTTTTCGTAAAGCTACATCCATATTGGAATTTTACCGGGAACTTGGATTGCCGCCGAAACAGAC AGTTAAAATCTTTAATATAACAGATAATGCTGCAATTAAACCAGGCACTCCTCTTTATGCTGCTCACTTTCGTCC TCGACAGTATGTGGATGTCACAGCCAAATCGTAGTGGTAAAGGTTTTCAAGGTGTCATGAAAAGATGGGGATTTA AAGGCCAGCCTGCTACGCATGGTCAAACGAAAACCCACAGGAGACCTGGAGCTGTTGCAACTGGTGATATTGGCA GAGTCTGGCCTGGAACTAAAATGCCTGGAAAAATGGGAAACATATACAGGACAGAATATGGACTGAAAGTGTGGA GAATAAACACAAAGCACAACATAATCTATGTAAATGGCTCTGTACCTGGACATAAAAATTGCTTAGTAAAGGTCA AAGATTCTAAACTGCCTGCATATAAGGATCTCGGTAAAAATCTACCATTCCCTACATATTTTCCTGATGGAGATG ${\tt AAGAGGAACTGCCAGAAGATTTGTATGATGAAAACGTGTGTCAGCCCGGTGCGCCTTCTATTACATTTGCCTAACCCCCGGTGCGCCCTTCTATTACATTTGCCTAACCCCCGGTGCGCCCTTCTATTACATTTGCCTAACCCCCGGTGCGCCCTTCTATTACATTTGCCTAACCCCCGGTGCGCCCTTCTATTACATTTGCCTAACCCCCGGTGCGCCCTTCTATTACATTTGCCTAACCCCGGTGCGCCTTCTATTACATTTGCCTAACCCCGGTGCGCCCTTCTATTACATTTGCCTAACCCCGGTGCGCTGCGCCCTTCTATTACATTTGCCTAACCCCGGTGCGCCCTTCTATTACATTTGCCTAACCCCGGTGCGCCCTTCTATTACATTTGCCTAACCCCGGTGCGCCCTTCTATTACATTTGCCTAACCCCGGTGCGCCCTTCTATTACATTTGCCTAACCCCGGTGCGCCCTTCTATTACATTTGCCTAACCCCGGTGCGCCCTTCTATTACATTTGCCTAACCCCGGTGCGCCCTTCTATTACATTTGCCTAACCCCGGTGCGCCCTTCTATTACATTTGCCTAACCCCGGTGCGCCCTTCTATTACATTTGCCTAACCCCGGTGCGCCCTTCTATTACATTTGCCTAACCCCGGTGCGCCCTTCTATTACATTTGCCTAACCCCGGTGCGCCCTTCTATTACATTTGCCTAACCCCGGTGCGCCCTTCTATTACATTTGCCTAACCCCGGTGCGCCCTTCTATTACATTTGCCTAACCCCGGTGCGCCCTTCTATTACATTTGCCTAACCCCGGTGCGCCCTTCTATTACATTTGCCCTAACCCCGGTGCGCCCTTCTATTACATTTGCCCTAACCCCGGTGCGCCCTTCTATTACATTTGCCCTAACCCCGGTGCGCCCTTCTATTACATTTGCCCTAACCCCGGTGCGCCCTTCTATTACATTTGCCCTAACCCCGGTGCGCCCTTCTATTACATTTGCCCTAACCCCGGTGCGCGCTGCTAACCATTACATTTGCCTAACCATTACATACATTACATTACATTACAT$ ATCTTTGGACGTGGCAGAACCTTACATATTCTGTGAGCTTCGATGAGCCAGAGTGATATCATAACCACCAGAAAT ${\tt CCCATTAAATTTTGTTAGAAAAATTACCACATTAAATATATGAGTTAAGTAGATTTGGATTTGCTGAAATTGGTGT}$ TGGGCATATTAGCAAAATATTCTTAATTTGTGGACTCGATTCTTTTTTACTACATATTTCCCAAGTTATCTTAAG ATGTCTGTAAATTTAACTTTTATTAAAGTTTTGTCAATCTTTGTGAATAGTGGTTGTGGAACAGTAGAAAACCAT ATGGGGACTATAGTGCAACCTATTTGGGTAAAGAAACCATTTGCTAAAATGGAGAAAGTAAATAGATTTTATTT AAATTACAGAAACATGTTAAAGGCCGGACAAAGGAAAGACAATAAAATCATAAATTATC

WO 2004/030615 PCT/US2003/028547

1348/6881 FIGURE 1255

.

1349/6881 FIGURE 1256A

GAGGTCAGACCGGTTGCTTTCCCGGGAGTTCGGCGTTTGCTGGGGCTGCAGCAGCTGAAGTGTAGTGTTTTCTTG ACGGGTGTAGCGATCCGCGCTAGAGGAAGACGAGGCCCGGGAACGCATGTCCCCCAGGGCAGGTTAGGGGGCTGG AGGGGTCAAATCCCGGGGTACTTGTGGAGACTCTTTAGCGTGGCTTCTTCTCTCTGCTGAGACCCCGAGAGCTTT CCCAGTTCTCCTCCCAGGACCACCGGGGTTCCTGAAGATCGGGACTTTTCTGCGCCCCTCCACCAACAGCCCATC TCCTGTCTATGAAGAAGACCCTTCGTAGAAACAACTTCCCCGCTGCTGACGCGTTTTCCCGTCCCGTAA GTAGTCTACTATGACCTCGTTGTGAGCCTCTGAACGATTTTGACACTTTCCCGAGGCCTAGGGTATTATATCCTA ${\tt ACCTTACTAAAGACCACAGAGGTGCTTGCCATT}$ TCTGTAGAGAGTTATTTTCAGATATTCATGACTTTGAATATGATAAAAGCCTGGGGAGTACTCGGTTTTTTAAA GTTGCTCGAGCCAAGCACCGAGAAGGCCTGGTCGTTGTGAAGGTTTTTGCAATTCAGGATCCCACATTGCCTTTA ACCAGCTATAAACAAGAGCTGGAGGAACTGAAAATCAGGCTTAATTCTGCACAGAATTGTCTACCTTTCCAGAAA GCATCAGAAAAAGCATCTGAGAAAGCAGCTATGCTCTTTAGGCAGTATGTGCGAGACAATCTCTATGATCGCATC AGTACCCGTCCATTCTTGAATAACATTGAGAAGCGCTGGATTGCTTTCCAGATCCTGACAGCTGTGGACCAAGCA CACAAATCTGGAGTTCGTCATGGGGACATCAAGACTGAGAATGTGATGGTCACCAGTTGGAATTGGGTTCTTCTA ACTGATTTTGCCAGTTTTAAGCCCACTTATCTTCCAGAAGACAACCCGGCAGATTTCAATTATTTCTTTGACACA TCACGGAGGAGAACTTGCTATATTGCTCCTGAACGTTTTGTTGATGGTGGGATGTTTGCCACTGAGTTAGAATAT ATGAGAGATCCTTCAACTCCGCTTGTAGACTTAAATAGCAATCAGAGAACAAGAGGAGAGTTGAAGAGAGCAATG GACATCTTTTCAGCAGGTTGTGTGATAGCTGAGCTTTTTACAGAAGGTGTACCATTATTTGATCTCTCAACTT GTAACTCAGATGATTCACCGTGAGCCAGATAAACGTTTAGAGGCAGAAGATTACTTAAAACAGCAGCGTGGCAAT GATGAGCGTATTCTGGTTATACGGAAGGATTTGGGCAACATTATTCACAATCTCTGTGGACATGATCTGCCAGAA AAAGCCGAAGGAGACCTAAGGAAAATGGGCTGGTTATCTTGGTATCTGTTATAACATCCTGCCTACAGACCCTT AAATACTGTGATTCCAAACTAGCTGCTTTGGAACTGATTCTTCATTTGGCTCCAAGATTAAGTGTTGAAATCCTT TTGGATCGTATTACTCCATATCTTTTGCATTTCAGCAATGACTCTGTTCCTAGGGTGAGGGCTGAAGCCTTGAGG ACGTTGACCAAAGTTCTTGCTCTCGTCAAAGAGGTTCCTCGTAATGATATCAATATTTATCCGGAATACATTCTG CCAGGCATAGCCCACTTAGCCCAAGATGATGCTACTATCGTTAGACTAGCCTATGCTGAAAAACATAGCTCTGCTG GCAGAAACAGCTCTGAGATTCTTGGAATTAGTACAGTTAAAAAATCTTAATATGGAAAATGACCCCAATAATGAA GAAATAGATGAGGTTACACATCCAAATGGAAATTATGACACAGAGCTCCAAGCCTTACATGAAATGGTCCAGCAG TGTGTATTCTTTGGACGTCAGAAAGCCAACGATGTTTTGTTGTCCCACATGATTACTTTCCTAAATGATAAGAAT ATTCTCAAGCCTCTGCTGCAACAAGGTCTTAGTGATGCTGAGGAATTTGTCATTGTGAAAGCTCTTTATGCCCTT ACTTGTATGTGCCAGTTAGGACTGCTACAAAAACCCCATGTTTACGAATTTGCCAGTGATATTGCCCCCTTCCTG TGTCATCCCAATTTATGGATACGTTATGGTGCCGTGGGATTTATCACAGTGGTAGCTCGTCAAATAAGTACAGCT GTTCTGCTCAGTGTTTTAAAGGAACCAGTAAGTCGTTCTATATTTGATTATGCTTTGAGGTCTAAAGATATTACT AGCTTGTTCAGACATCTTCACATGCGTCAGAAGAAACGAAATGGTTCTCTTCCCGACTGCCCTCCGCCAGAGGAT CCTGCCATAGCACAGCTTCTGAAGAAGTTGCTCTCACAGGGAATGACAGAGGAAGAGAAGACAAACTTCTGGCA CTGAAAGACTTCATGATGAAATCTAATAAAGCAAAGGCCAATATAGTGGACCAGAGCCATCTTCATGATAGTAGT CAGAAAGGTGTAATTGACTTGGCAGCTTTAGGCATAACTGGGAGACAAGTTGATCTTGTTAAAACCAAACAAGAA CCAGATGACAAACGGGCCAGAAAACATGTAAAACAAGACTCAAATGTAAATGAAGAATGGAAAAGCATGTTTGGG TCACTGGACCCACCAAACATGCCACAGGCCCTACCTAAAGGGAGTGATCAGGAGGTGATTCAGACTGGGAAACCT CCTCGTTCCGAGTCCTCTGCTGGCATTTGTGTCCCTTTGTCAACTTCTTCACAGGTTCCAGAAGTGACAACTGTC CAAAATAAAAAACCAGTAATACCGGTTTTAAGTAGTACAATCTTACCATCCACCTATCAGATTCGAATTACAACT TGTAAAACTGAACTTCAGCAACTCATCCAGCAAAAGCGGGAGCAGTGCAATGCTGAGAGAATAGCTAAGCAGATG ATGGAAAATGCTGAATGGGAGAGTAAACCACCACCACCTGGATGGCGTCCTAAAGGGCTGTTAGTTGCCCATCTT

FIGURE 1256B

 ${\tt CGAATTGGAGGACGAGTCAAGACGCTCACATTCTGCCAAGGCTCCCACTATTTAGCCATAGCATCTGATAATGGT}$ $\tt CTAGATCAGAAGGAGGACGGTTGTTGTGGATATGCATCACTTCAACTCTGGAGCACAGTCTGTTCTTGCCTAT$ GCCACTGTGAATGGCTCTCTGGTTGGCTGGGACCTTAGGTCTTCAAGCAATGCGTGGACTTTAAAGCATGATTTA ${\tt ATGGCTTGTTGGGACATGAGGTTCCAGTTGCCAATTTCAAGTCACTGTCATCCTTCCAGGGCTCGAATCAGACGC}$ ${\tt ATGGAGACTGGTGACAGAAGATTTACTCTCTGGGCCAGCAGTGCACCACCACTTTCTGAATTACAGCCTTCTCCT}$ CATAGCGTCCATGGTATCTACTGTAGTCCTGCAGATGGAAATCCTATCCTACTAACAGCTGGCTCAGATATGAAA ATAAGGTTTTGGGACTTGGCTTACCCAGAAAGGTCCTATGTTGTTGCAGGAAGTACTAGTTCCCCATCTGTGTCC TACTACAGGAAAATAATTGAAGGCACTGAAGTTGTCCAGGAAATTCAGAATAAGCAGAAAGTAGGACCAAGTGAT GACACCCTCGAAGGGGCCCAGAGTCCCTGCCCGTGGGACATCATGACATCACTGATGTCGCCACATTCCAG ${\tt ACCACAGGGCTTCATCGTAACTGCTTCTAGAGATGGGATTGTGAAGGTGTGGAAA} \underline{{\tt TAA}} {\tt AACCTACTGATTTGT}$ ATAAATTTTAATAGTTATAAATATAATACTATAACTCGAGAAAAGGCATTTCTAGAGAACAGATTCATTTGCTTA TATAGAGGTGAGAAATGTAAAATATGAAAATGAATATGTTTATTTTGTATTGAAAAAGATGGTTGAAAAAGATGGT TGTAAGCTATTATAGTATAAACACATTTTTGCTATTAAAAATGCTATTCAAAGCAGTTAAACTGT

 ${\tt MGNQLAGIAPSQILSVESYFSDIHDFEYDKSLGSTRFFKVARAKHREGLVVVKVFAIQDPTLPLTSYKQELEELK}$ IRLNSAQNCLPFQKASEKASEKAAMLFRQYVRDNLYDRISTRPFLNNIEKRWIAFQILTAVDQAHKSGVRHGDIK TENVMVTSWNWVLLTDFASFKPTYLPEDNPADFNYFFDTSRRRTCYIAPERFVDGGMFATELEYMRDPSTPLVDL $\tt NSNQRTRGELKRAMDIFSAGCVIAELFTEGVPLFDLSQLLAYRNGHFFPEQVLNKIEDHSIRELVTQMIHREPDK$ $\verb"RLEAEDYLKQQRGNAFPEIFYTFLQPYMAQFAKETFLSADERILVIRKDLGNIIHNLCGHDLPEKAEGEPKENGL"$ VILVSVITSCLOTLKYCDSKLAALELILHLAPRLSVEILLDRITPYLLHFSNDSVPRVRAEALRTLTKVLALVKE VPRNDINIYPEYILPGIAHLAQDDATIVRLAYAENIALLAETALRFLELVQLKNLNMENDPNNEEIDEVTHPNGN YDTELOALHEMVOOKVVTLLSDPENIVKQTLMENGITRLCVFFGRQKANDVLLSHMITFLNDKNDWHLRGAFFDS IVGVAAYVGWQSSSILKPLLQQGLSDAEEFVIVKALYALTCMCQLGLLQKPHVYEFASDIAPFLCHPNLWIRYGA VGFITVVAROISTADVYCKLMPYLDPYITOPIIOIERKLVLLSVLKEPVSRSIFDYALRSKDITSLFRHLHMRQK KRNGSLPDCPPPEDPAIAQLLKKLLSQGMTEEEEDKLLALKDFMMKSNKAKANIVDQSHLHDSSQKGVIDLAALG ITGROVDLVKTKOEPDDKRARKHVKODSNVNEEWKSMFGSLDPPNMPQALPKGSDQEVIQTGKPPRSESSAGICV ${\tt PLSTSSQVPEVTTVQNKKPVIPVLSSTILPSTYQIRITTCKTELQQLIQQKREQCNAERIAKQMMENAEWESKPP}$ PPGWRPKGLLVAHLHEHKSAVNRIRVSDEHSLFATCSNDGTVKIWNSQKMEGKTTTTRSILTYSRIGGRVKTLTF CQGSHYLAIASDNGAVQLLGIEASKLPKSPKIHPLQSRILDQKEDGCVVDMHHFNSGAQSVLAYATVNGSLVGWD LRSSSNAWTLKHDLKSGLITSFAVDIHOCWLCIGTSSGTMACWDMRFQLPISSHCHPSRARIRRLSMHPLYQSWV IAAVQGNNEVSMWDMETGDRRFTLWASSAPPLSELQPSPHSVHGIYCSPADGNPILLTAGSDMKIRFWDLAYPER SYVVAGSTSSPSVSYYRKIIEGTEVVQEIQNKQKVGPSDDTPRRGPESLPVGHHDIITDVATFQTTQGFIVTASR DGIVKVWK

1352/6881 FIGURE 1258A

GGCCCTGCCTTCTCCATCAGACACCTGGGAATCACAGCTGGGGCCCCTGCTTTGGCCGTTTGTCCTGCAAATC AGGGGCTGAAGGAACTGCCTGAGGATGACAAAGAAGGGGGATCCATGAACAAGGAGGTGCTAACAGGTTTCCTGCT GATCTTGGCACTGACCGAAGCGCTGGCATTTGCCATCCAGGAACCATCTCCCAGGGAATCTCTTCAGGTCCTCCC TTCAGGCACTCCCCGGGAACCATGGTGACAGCACCCCACAGCTCTACCAGACATACTTCTGTGGTGATGCTGAC CCCCAATCCCGATGGACCCCCCTCACAGGCTGCAGCTCCCATGGCAACACCGACACCCCGTGCAGAGGGGCACCC TCCTACGCACCATCTCCACCATCGCTGCGACAGTAACCGCCCCCATTCTGAAAGCTCCCTGTCCACAGGGCC CGCTCCAGCAGCCATGGCAACCACATCCTCCAAGCCAGAGGGCCGCCCTCGAGGGCAGGCTGCCCCCACCATCCT GCCCCCAGGCTCTTCCCGAAAAGGGGCTGGTAATTCATCACGCCCTGTCCCGCCTGCACCTGGTGGCCACTCCAG GAGTAAAGAAGGACAGCGAGGACGAAATCCAAGCTCCACACCTCTGGGGCAGAAGCGGCCCCTGGGGAAAATCTT TCAGATCTACAAGGGCAACTTCACAGGGTCTGTGGAACCGGAGCCCTCTACCCTCACCCCCAGGACCCCACTCTG GGGCTACTCCTCTTCACCACAGCCCCAGACAGTGGCTGCGACCACAGTGCCCAGCAATACCTCATGGGCACCCAC CAGCCAAGGAGGACACCAGATGCCACAGCAGCCTCAGGTGCCCCTGTCAGTCCACAAGCTGCCCCAGTGCCTTC TCAGCGCCCCCACCACGGTGACCCACAGGATGGCCCCAGCCATAGTGACTCTTGGCTTACTGTTACCCCTGGCAC CAGCAGACCTCTGTCTACCAGCTCTGGGGTCTTCACGGCTGCCACGGGGGCCCACCCCAGCTGCCTTCGATACCAG TGTCTCAGCCCCTTCCCAGGGGATTCCTCAGGGAGCATCCACAACCCCACAAGCTCCAACCCATCCCTCCAGGGT TCTCTCCACAGTGGTATCCACAGCCACAGGCAATTTCCTCAACCGCCTGGTCCCCGCCGGGACCTGGAAGCCTGG GACAGCAGGGAACATCTCCCATGTGGCCGAGGGGGACAAACCGCAGCACAGAGCCACCATCTGCCTGAGCAAGAT GGATATCGCCTGGGTGATCCTGGCCATCAGCGTGCCCATCTCCTCCTGCTGTCCTGCTGACGGTGTGCTGCAT GAAGAGGAAGAAGAAGACCGCCAACCCGGAGAACAACCTGAGCTACTGGAACAACACCATCACCATGGACTACTT CAACAGGCATGCTGTGGAGCTGCCCAGGGAGATCCAGTCCCTTGAAACCTCTGAGGACCAGCTCTCAGAGCCCCG CTCCCCAGCCAATGGCGACTATAGAGACACTGGGATGGTCCTTGTTAACCCCTTCTGTCAAGAAACACTGTTTGT GGGAAACGATCAAGTATCTGAGATCTAACTACAGCAGGCATCACTTTGCCATTCCGTATTTTTCGTCTCTAAATT ATAAATATACAAATACATATATTATAAATATAACCTTTGTGTAACCCTGACTTAATGAGAAACATTTTCAGCTTT TGGGGATCCCAGGAACCCTGGTCAGGTGAGGTAAGAGACTGACCTCCTGTAGAAGCTGAATGTTACAGTGCAAGC GCACGATTCTTTGAGTGATTCTTAAAGCTCTGGTTCCTCTTGATTTGGTGTGACCCCATTTCCTCCCTTCTCATA CGCACACCTGTAAAGGGAACTGGACCGCCTCAGGGGAAGACGGCAGACTCATGCACAGAGAAAGGGAAAAGGGAACA GTTGTGGATGGCAGGCAGGAGCATGGAGCCCTCAGGAATCCATGGAGGACATCAAGGCATCCCAAGGCCATATTC CCCTAACATTACTTCCACTGCTAACAACAGGACTGCCTTTCCCTGGTGGGAAAATGCTCCCTTTATGCCCATTCC TGTATCCCCTCCAACACCCACATCTGCATTAAACACCCGTGCCTTTCTCTTGGAGAGGGTTTAGATGCAGATCCC GGCCCTGGAGCTTTAAAATGCTTGCCCTTCCTTCTTCAAGGATCAAATGTTTATTGGGGTTCAGCTTTGTTTTCT CAAAAGGCCATGGTATCGTGCCCCTGAGGAACATGTTTATCTAAGAAGCTTTGAGGTAGTAGAGCGATAATTTTT ATACTCCTACTTGGCACTGCAAACCTGCTCGCAGCACCAGCCGGTGGACTTGCCATCCAGCTCTCAGCTTCCACT GCTCCCCTTGTTCCCGGCCGGCTGGCTGCCTCCCCGTGCTGTCCAGCACGGCCAACAACGTCAGACCCTCAGA TTGACACTTCCTTTCTCTAAAAGAAAATAGTTTGATAGTATATTTTGAATATAGATGCTCTTATAGTCAGATTG TTCCTTAAAAAAAAAAAAAAAGATGGCCTTCAAAAGTGTGTTCTCAATGTTGTATGAACCTCCTTCACATGAGTTC GGTTGTTGTCTCTCTCAAAGACTCTTCAACCCACAAAGAAGCAACTAAATGTTTCTCTAAGTTTAATTTTCTAG CGTGTTGTTGTCTTACCTTTTTAACCTTACCATAATATTTCTGTTAACTGTTACATTTAATATACCAATGTGTGT

1353/6881 FIGURE 1258B

FIGURE 1259

MKRSLQALYCQLLSFLLILALTEALAFAIQEPSPRESLQVLPSGTPPGTMVTAPHSSTRHTSVVMLTPNPDGPPS
QAAAPMATPTPRAEGHPPTHTISTIAATVTAPHSESSLSTGPAPAAMATTSSKPEGRPRGQAAPTILLTKPPGAT
SRPTTAPPRTTTRRPPRPPGSSRKGAGNSSRPVPPAPGGHSRSKEGQRGRNPSSTPLGQKRPLGKIFQIYKGNFT
GSVEPEPSTLTPRTPLWGYSSSPQPQTVAATTVPSNTSWAPTTTSLGPAKDKPGLRRAAQGGGSTFTSQGGTPDA
TAASGAPVSPQAAPVPSQRPHHGDPQDGPSHSDSWLTVTPGTSRPLSTSSGVFTAATGPTPAAFDTSVSAPSQGI
PQGASTTPQAPTHPSRVSESTISGAKEETVATLTMTDRVPSPLSTVVSTATGNFLNRLVPAGTWKPGTAGNISHV
AEGDKPQHRATICLSKMDIAWVILAISVPISSCSVLLTVCCMKRKKKTANPENNLSYWNNTITMDYFNRHAVELP
REIQSLETSEDQLSEPRSPANGDYRDTGMVLVNPFCQETLFVGNDQVSEI

<u>ATG</u>GCGGCGGCATTACGGGTGGCGGCGGTCGGGGCAAGGCTCAGCGTTCTGGCGAGCGGTCTCCGCGCCGCGGTC CGCAGCCTTTGCAGCCAGGCCACCTCTGTTAACGAACGCATCGAAAACAAGCGCCGGACCGCGCTGCTGGGAGGG GGCCAACGCCGTATTGACGCGCAGCACAAGCGAGGAAAGCTAACAGCCAGGGAGAGATCAGTCTCTTGCTGGAC CCTGGCAGCTTTGTTGAGAGCGACATGTTTGTGGAACACAGATGTGCAGATTTTGGAATGGCTGCTGACAAGAAT TTTACAGTTTTTGGAGGCAGTCTGTCAGGAGCACATGCCCAAAAGATCTGCAAAATCATGGACCAGGCCATAACG TATGCAGACATCTTTCTGAGGAATGTTACGGCATCCGGAGTCATCCCTCAGATTTCTCTGATCATGGGCCCATGT GCTGGTGGGGCCGTCTACTCCCCAGCCCTAACAGACTTCACGTTCATGGTAAAGGACACCTCCTACCTGTTCATC ACTGGCCCTGATGTTGTGAAGTCTGTCACCAATGAGGATGTTACCCAGGAGGAGCTCGGTGGTGCCAAGACCCAC ACCACCATGTCAGGTGTGGCCCACAGAGCTTTTGAAAATGATGTTGATGCCTTGTGTAATCTCCGGGATTTCTTC GAGCTTGACACAATTGTCCCTTTGGAATCAACCAAAGCCTACAACATGGTGGACATCATACACTCTGTTGTTGAT ACTGTTGGAATTGTTGGCAACCAACCTAAGGTGGCCTCAGGATGCTTGGATATTAATTCATCTGTGAAAGGGGGCT CGTTTTGTCAGATTCTGTGATGCATTCAATATTCCACTCATCACTTTTGTTGATGTCCCTGGCTTTCTACCTGGC ACAGCACAGGAATACGGGGGCATCATCCGGCATGGTGCCAAGCTTCTCTACGCATTTGCTGAGGCAACTGTACCC AAAGTCACAGTCATCACCAGGAAGGCCTATGGAGGTGCCTATGATGTCATGAGCTCTAAGCACCTTTGTGGTGAT ACCAACTATGCCTGGCCCACCGCAGAGATTGCAGTCATGGGAGCAAAGGGCCGCTGTGGAGATCATCTTCAAAGGG CATGAGAATGTGGAAGCTGCTCAGGCAGAGTACATCGAGAAGTTTGCCAACCCTTTCCCTGCAGCAGTGCGAGGG TTTGTGGATGACATCATCCAACCTTCTTCCACACGTGCCCGAATCTGCTGTGACCTGGATGTCTTGGCCAGCAAG AAGGTACAACGTCCTTGGAGAAAACATGCAAATATTCCATTG<u>TAA</u>

MAAALRVAAVGARLSVLASGLRAAVRSLCSQATSVNERIENKRRTALLGGGQRRIDAQHKRGKLTARERISLLLD PGSFVESDMFVEHRCADFGMAADKNKFPGDSVVTGRGRINGRLVYVFSQDFTVFGGSLSGAHAQKICKIMDQAIT VGAPVIGLNDSGGARIQEGVESLAGYADIFLRNVTASGVIPQISLIMGPCAGGAVYSPALTDFTFMVKDTSYLFI TGPDVVKSVTNEDVTQEELGGAKTHTTMSGVAHRAFENDVDALCNLRDFFNYLPLSSQDPASVRECHDPSDRLVP ELDTIVPLESTKAYNMVDIIHSVVDEREFFEIMPNYAKNIIVGFARMNGRTVGIVGNQPKVASGCLDINSSVKGA RFVRFCDAFNIPLITFVDVPGFLPGTAQEYGGIIRHGAKLLYAFAEATVPKVTVITRKAYGGAYDVMSSKHLCGD TNYAWPTAEIAVMGAKGAVEIIFKGHENVEAAQAEYIEKFANPFPAAVRGFVDDIIQPSSTRARICCDLDVLASK KVQRPWRKHANIPL

GAGGCTATGGCGCTCAACAAGAATCACTCGGAGGGCGGCGGAGTGATCGTCAATAACACCGAGAGCATCCTAATG TCCTATGATCACGTGGAACTCACATTCAATGACATGAAGAACGTGCCAGAAGCCTTCAAAGGGACCAAGAAAGGC ACTGTCTACCCTTACCGGGTCATCTTTCTGTCCAAGGGCAAGGATGCCATGCAGTCCTTCATGATGCCA TTTTATCTCATGAAAGACTGTGAGATCAAGCAGCCCGTATTTGGTGCAAACTACATCAAGGGAACAGTGAAGGCG GAAGCGGGAGGTGGCTGGGAAGGCTCTGCTTCCTACAAGTTGACTTTCACGGCAGGGGGGCGCCATTGAGTTCGGA CAGCGGATGCTCCAGGTGGCATCTCAAGCCTCCAGAGGTGAAGTCCCCAGTGGAGCCTATGGCTACTCTTACATG CCCAGCGGGGCCTATGTCTATCCCCCGCCAGTCGCCAATGGAATGTACCCCTGCCCTCCTGGCTACCCCTATCCA CCGCCCCACCTGAGTTCTATCCAGGACCCCCATGATGGACGGGGCCATGGGATACGTGCAGCCCCACCACCG CCCTACCCTGGGCCCATGGAACCTCCGGTCAGCGGCCCCGATGTCCCCTCCACTCCTGCAGCCGAAGCCAAGGCC CCACCTCCCTACTACCCACCGGAAGATAAGAAGACCCAGTAGGCCCTCCTGCCTCCCTGCCTCCCACCCTCATCT CTGATCATAAACAATTACCAGGAACTAGCATTGTGGGACATTAGGGCCCCCGGCCTCGGGAGAGGTGCCGCCCAG GGAGCATCCCCTGTTCCTGTTTCACTCTCAGCTTCTCCCCTCGAAGGGACTCTCTGGCCACCTCCTCCACCGCAG GGGCCCTGCCAGACCCTGCTCACATTCCCTCTGCTGGTCTGTGCTGGTCTCAGAAGGCCACCGCGCCCCGCATTCC TGTGTGACTTTTGAAGCTGTAAAATGAGCTTCCAGGGCTTGGGTGGCGTCGGGGCAGGCCGCCGAGGCTGGGAG CCTGTGTGCCGGGGACCTGCCACCAGCCCCCAGCCTGCTTCTTCCCCTTAAGCTTTGTGCCCCTGGATGCG CTAACATTCACTCTTGTTTGTCCCTGGACTGGCCATGAAGTGAGGAGATGGTTATTTAAAGAGAATTCCCTATTT ATTTGACAAAAAATCCAGTTAATATATTAATGTGAAATAAACCCTGTTTGCCCCTCG

AGGACCTGGAGGACCTGTACAGCCGCTACAAGAAGCTGCAGCAAGAGCTGGAGTTCCTGGAGGTGCAGGAGGAAT ACATCAAAGATGAGCAAAAGAACCTGAAAAAGGAATTTCTCCATGCCCAGGAGGAGGTGAAGCGAATCCAAAGCA TCCCGCTGGTCATCGGACAATTTCTGGAGGCTGTGGATCAGAATACAGCCATCGTGGGCTCTACCACAGGCTCCA ACAGCAATGCACTGGTGGACGTGCTGCCCCCGAAGCCGACAGCAGCATCATGATGCTCACCTCAGACCAGAAGC ${\tt CAGATGTGATGTACGCGGACATCGGAGGCATGGACATCCAGAAGCAGGAGGTGCGGGAGGCCGTGGAGCTCCCGC}$ TCACGCATTTCGAGCTCTACAAGCAGATCGGCATCGATCCCCCCGAGGCGTCCTCATGTATGGCCCACCTGGCT GTGGGAAGACCATGTTGGCAAAGGCGGTGGCACATCACACAACAGCTGCATTCATCCGGGTCGTGGGCTCGGAGT TTGTACAGAAGTATCTGGGTGAGGGCCCCCGCATGGTCCGGGATGTTCCGCCTGGCCAAGGAGAATGCACCTG CCATCATCTTCATAGACGAGATTGATGCCATCGCCACCAAGAGATTCGATGCTCAGACAGGGGCCGACAGGGAGG CCACAAACAGAGCAGACACCCTGGATCCGGCCCTGCTACGGCCAGGACGGCTGGACCGTAAAATTGAATTTCCAC TTCCTGACCGCCGCCAGAAGAGATTGATTTTCTCCACTATCACTAGCAAGATGAACCTCTCTGAGGAGGTTGACT TGGAAGACTATGTGGCCCGGCCAGATAAGATTTCAGGAGCTGATATTAACTCCATCTGTCAGGAGAGTGGAATGT TGGCTGTCCGTGAAAACCGCTACATTGTCCTGGCCAAGGACTTCGAGAAAGCATACAAGACTGTCATCAAGAAGG ATAAGATCGAATCC

CTGGAAGAATTCGCGGCCGAAGTGGCTGGCTCATTTAAGATGAGGCTTCTGCTGCTTCTCCTAGTGGCGGCGTCT GCGATGGTCCGGAGCGAGGCCTCGGCCAATCTGGGCGGCGTGCCCAGCAAGAGATTAAAGATGCAGTACGCCACG GGGCCGCTGCTCAAGTTCCAGATTTGTGTTTCCTGAGGTTATAGGCGGGTGTTTGAGGAGTACATGCGGGTTATT CAAGCTCCTAGCATCTGGCAGTGGGGCCAAGAAAATAAGGTTTATGCATGTATGATGGTTTTCTTCTTGAGCAAC ATGATTGAGAACCAGTGTATGTCAACAGGTGCATTTGAGATAACTTTAAATGATGTACCTGTGTGGTCTAAGCTG GAATCTGGTCACCTTCCATCCATGCAACAACTTGTTCAAATTCTTGACAATGAAATGAAGCTCAATGTGCATATG GATTCAATCCCACCCATCGATCATAGCACCACCTATCAGCACTGAAAACTCTTTTGCATTAAGGGATCATTGCA AGAGCAGCGTGACTATTATGAAGGCCTGTACTGAAGACAGCAGCTGTTAGTACAGACCAGATGCTTTCTTG ${\tt GCAGGCTCGTTGTACCTCTTGGAAAACCTCAATGCAAGATAGTGTTTCAGTGCTGGCATATTTTGGAATTCTGCA}$ CAATTTGATTTTTTTCCAAAGATGTCTGTTAAATCTGTTGTGCTTTTATATGAATATTTGTTTTTTATAGTTTA AAATTGATCCTTTGGGAATCCAGTTGAAGTTCCCAAATACTTTATAAGAGTTTATCAGACATCTCTAATTTGGCC ATGTCCAGTTTATACAGTTTACAAAATATAGCAGATGCAAGATTATGGGGGAAATCCTATATTCAGAGTACTCTA TAAATTTTTGTGTATGTGTGTATGTGCGTGTGATTACCAGAGAACTACTAAAAAAACCAACTGCTTTTTAAATCC AATAAAAAACTAAGCAGATATGA

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FIGURE 1265

CAATTAAGTTGCAGAGTTCTGATGGAGAGATATTTGAAGTTGATGTGGAAATTGCCAAACAATCTGTGACTATTA CAATATTAAAAAAGGTCATTCAGTGGTGCACCCACCACAAGGATGACCCTCCTCCTCCTGAAGATGATGAGAACA AAGAAAAGCGAACAGATGATATCCCTGTTTGGGACCAAGAATTCCTGAAAGTTGACCAAGGAACACTTTTTGAAC TCATTCTGGCTGCAAACTACTTAGACATCAAAGGTTTGCTTGATGTTACATGCAAGACTGTTGCCAATATGATCA AGGGGAAAACTCCTGAGGAGATTCGCAAGACCTTCAATATCAAAAATGACTTTCCCTCTTTTTTTGTAAAGCAATG AAGTTTTCTGGAATAGAATTAACAAAATATTATCTTTATTCATGAGTTGGAAAACTGGAAAAAGGCTTCTTGAAGT AAATGTTCTGAGTGGAGCTACTAGGATGTCTTCCAGCCTCCTGCAGTCAAGGAGTACCACTGTATTGATTAGCCT AATATATTGCCTAGAGACTCAGTTACTACCCAGTTTGTGGTTTTTTGGGAGAAATGTAACTGGACAGTTAGCTTT TCAATTAAAAAGACACTTAACCCATGTGGGATGTCATCTTTTTATAATTAGTGTTCCCATGTGGAGAAAATTATT TCTCTTCACTTAAATGGGTTGAATGTGTATATATTTGTTCAGCTTGAAAAGACTTAGTTTATATCCTAGCTCACT GGAGGCTGCTGACATAACCATAACTTCTGTCCCTTCTAATTGTCATTTATATGCCTAACTGGAGCTAGTACTTTA ATTCTTAACACAAAATTACTCTGCCATTGTTTCCAGCTTCCCTCCTACAATAGAATGAAGTTTTTTTGATGGCTT GAGATGGCTCACAAATTTTGATTTTTTTTTTCTTCCTTGTGCTCCCTTTTTTTCTCCTTGCTTTTCCAGTTAACAT CTATATTCACATGTAATCTTGTTTTCTCTTCACATTCACTGAGTTGTTCAGGCTCAGATCATCCCTTGACAGTAG TTTGCCTTCATCTCACCTTTCATTTGTCCCAAATTCACCTTATTTAATAAAGTCCCATATGTTGTCTCACTTAA

CAATTAAGTTGCAGAGTTCTGATGGAGAGATATTTGAAGTTGATGTGGAAATTGCCAAACAATCTGTGACTATTA CAATATTAAAAAAGGTCATTCAGTGGTGCACCCACCACAAGGATGACCCTCCTCCTCCTGAAGATGATGAGAACA AAGAAAAGCGAACAGATGATATCCCTGTTTGGGACCAAGAATTCCTGAAAGTTGACCAAGGAACACTTTTTGAAC TCATTCTGGCTGCAAACTACTTAGACATCAAAGGTTTGCTTGATGTTACATGCAAGACTGTTGCCAATATGATCA AGGGGAAAACTCCTGAGGAGATTCGCAAGACCTTCAATATCAAAAATGACTTTACTGAAGAGGAGGAAGCCCAGG TACGCAAAGAGAACCAGTGGTGTGAAGAGAGTGAAATGTTGTGCCTGACACTGTAACACTGTAAGGATTGTTCC AAATACTAGTTGCACTGCTCTGTTTATAATTGTTAATATTAGACAAACAGTAGACAAATGCAGCAAGTCAAT TGTATTAGCAGAATATTGTCCTCATTGCATGTGTAGTTTGAGCACAGATCCCAAACCTTACGGCCAAGTTTCTTC TAGTATGATGGAAAGTTTCTTTTTTTTTTGCTCTGAATAAAACTGAACTGTGGGTTCTCTATAAGTGGCATTTTG GGCTTTCCCTCTTTTTTGTAAAGCAATGTCTGCCTAGTTTATTGTCCAGTTAACTTTAGTGACCTTTTAAAAGTT GGCATTGTAAATAAAACAACTTGCAAAAAAGTTTTCTGGAATAGAATTAACAAAATATTATCTTTATTCATGAGT TGGAAACTGGAAAAAGGCTTCTTGAAGTAAATGTTCTGAGTGGAGCTACTAGGATGTCTTCCAGCCTCCTGCAGT CAAGGAGTACCACTGTATTGATTAGCCTGTATGTAGCAGGGCTCCCTTCATTGCATCTGAGGACTTGTTTTCTTT TTCTTTATTTTTAATCCTCTTAGTTTTAAATATATTGCCTAGAGACTCAGTTACTACCCAGTTTGTGGTTTTTTG GGAGAAATGTAACTGGACAGTTAGCTTTTCAATTAAAAAGACACTTAACCCATGTGGGATGTCATCTTTTATAA TTAGTGTTCCCATGTGGAGAAAATTATTCACACTACTTGCATGTAAAGAATAATTTAACTTTTAACATTAAAATA

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1364/6881 FIGURE 1269

MPSIQLQSFDGEIFAVDVEIAKQSVTIKTTLEDLGMDDEGDDPVPLPNVNAAVLKKVIQWCTHHKDDPPPPEDDE NKEKQTDDIPVWDQEFLKVAQGTLFELIRAANYLDIKGLLDVTCKTVANMIKGKTPEEIRKTFNIKNDFTEEEEA QVRKENQWCEEK WO 2004/030615 PCT/US2003/028547

1365/6881 FIGURE 1270

GGTGGGTTTATCTCAAGGCCTGAGTAGCCGGTAACAAACGAGGGTTCCCGGGATTGGACCGACGCACCATGCCTC TGCGACTTGATATCAAAAGAAAGCTAACTGCTAGATCTGATCGAGTTAAGAGTGTGGATCTGCATCCTACAGAGC CATGGATGTTGGCAAGTCTTTACAATGGCAGTGTGTGTTTTGGAATCATGAAACACAGACACTGGTGAAGACAT TTGAAGTATGTGATCTTCCTGTTCGAGCTGCAAAGTTTGTTGCAAGGAAGAATTGGGTTGTGACAGGAGCGGATG ACATGCAGATTAGAGTGTTCAATTACAATACTCTGGAGAGAGTTCATATGTTTGAAGCACACTCAGACTACATTC GCTGTATTGCTGTTCATCCAACCCAGCCTTTCATTCTAACTAGCAGTGATGACATGCTTATTAAGCTCTGGGACT GGGATAAAAAATGGTCTTGCTCACAAGTGTTTGAAGGACACCCCATTATGTTATGCAGATTGTGATCAACCCCA AAGATAACAATCAGTTTGCCAGTGCCTCTTTGGACAGGACTATCAAGGTGTGGCAGTTGGGCTCTTCGTCACCAA ACTTCACTTTGGAAGGACATGAGAAAGGCGTGAATTGCATTGATTACTACAGTGGTGGGGGACAAGCCATACCTCA TTTCAGGTGCAGATGACCGTCTTGTTAAAATATGGGATTATCAGAATAAAACATGTGTGCAGACACTGGAAGGAC ATGCCCAAAATGTGTCTTGTGCCAGCTTTCATCCTGAGTTGCCAATCATTATCACAGGTTCAGAAGATGGAACAG TACGTATTTGGCATTCAAGCACCTACCGGCTTGAGAGCACACTGAATTATGGAATGGAGGGTATGGTGCGTGG CCAGTCTAAGAGGGTCAAACAATGTCGCTTTGGGCTATGATGAAGGGAGCATCATTGTTAAGCTTGGTCGGGAGG AACCTGCCATGTCCATGGATGCCAATGGAAAGATAATTTGGGCCAAGCATTCAGAAGTCCAGCAGGCCAACCTAA AAGCAATGGGAGATGCTGAAATTAAAGATGGTGAAAGATTGCCACTGGCAGTAAAGGATATGGGCAGTTGTGAAA TATACCCTCAGACTATTCAGCACAATCCTAATGGGCGGTTTGTGGTGGTGTTGTGGTGATGGGGAGTATATCATCT ACACAGCAATGGCATTGAGAAACAAGAGCTTTGGATCTGCTCAGGAGTTTGCATGGGCCCACGATTCTTCAGAGT TTGGAGCAGAAAGTATCTACGGCGGCTTCTTATTGGGAGTCAGATCTGTAAATGGCTTAGCCTTCTATGACTGGG ACAATACAGAACTCATACGAAGAATTGAAATTCAGCCCAAACATATTTTCTGGTCTGACTCTGAGAGAGCTAGTCT GTATTGCTACTGAGGAATCATTTTTTATCCTTAAGTATCTGTCAGAAAAAGTCTTGGCTGCACAGGAAACACATG AGGGAGTTACTGAAGATGCCATTGAAGATGCCTTTGAGGTTCTTGGTGAGATTCAGGAAATTGTGAAAACAGGGC TTTGGGTAGGCGATTGCTTCATTTACACAAGTTCTGTGAACAGATTAAATTATTATGTTGGAGGAGAAATAGTCA CCATTGCCCACTTGGACAGGACGATGTATCTCCTAGGCTACATTCCTAAAGACAACAGGCTTTATCTGGGGGATA AAGAATTGAACATCATTAGCTATTCCCTGCTGGTTTCAGTCCTGGAATACCAGACAGCTGTCATGCGGAGGGACT TTAGCATGGCTGATAAGGTCCTTCCTACCATTCCAAAAGAACAGAGGACCAGAGTTGCACACTTTTTGGAAAAGC AGGGCTTCAAGCAGCAAGCTCTTACAGTATCCACAGATCCTGAGCATCGTTTTGAGCTTGCTCTTCAGCTTGGAG AGTTAAAAATTGCATACCAGTTAGCAGTGGAAGCAGAGTCAGAACAGAAGTGGAAACAACTTGCTGAACTTGCCA TTAGTAAATGTCAGTTTGGCCTAGCCCAGGAGTGCCTGCATCATGCACAGGATTATGGGGGCCTGCTGCTTTTGG CAAAAGTCAATCAGAAAGCAGCAGAATCCCTTGCTGACCCAACAGAGTATGAAAACCTGTTCCCTGGATTAAAAG CGCCAAATGAAGAGAGAAATGTCATGGAAGAGGGAAAAGACTTTCAGCCCTCAAGATCTACAGCTCAACAGGAAC TTGATGGGAAACCTGCTTCTCCTACTCCGGTTATTGTGGCCTCCCACACAGCCAACAAAGAAGAAAAAGAGTTTAC TCGAACTAGAAGTAGATTTGGATAATTTGGAATTAGAAGATATTGACACAACAGATATCAATCTGGATGAAGATA ACCCTGACCACAGTGCTTTGGACTATGAGAAACTTCTTAGATTTTTATATGTAAATGCTGTGGACCACTGGGAGC ACAATGCCCACATCATCTTAAGAAGAGTTTATGTGCAGCATTTAAATCACTGTGTTTTCCTTGTTAACTAAAACA

MPLRLDIKRKLTARSDRVKSVDLHPTEPWMLASLYNGSVCVWNHETQTLVKTFEVCDLPVRAAKFVARKNWVVTG
ADDMQIRVFNYNTLERVHMFEAHSDYIRCIAVHPTQFFILTSSDDMLIKLWDWDKKWSCSQVFEGHTHYVMQIVI
NPKDNNQFASASLDRTIKVWQLGSSSPNFTLEGHEKGVNCIDYYSGGDKPYLISGADDRLVKIWDYQNKTCVQTL
EGHAQNVSCASFHPELPIIITGSEDGTVRIWHSSTYRLESTLNYGMERVWCVASLRGSNNVALGYDEGSIIVKLG
REEPAMSMDANGKIIWAKHSEVQQANLKAMGDAEIKDGERLPLAVKDMGSCEIYPQTIQHNPNGRFVVVCGDGEY
IIYTAMALRNKSFGSAQEFAWAHDSSEYAIRESNSIVKIFKNFKEKKSFKPDFGAESIYGGFLLGVRSVNGLAFY
DWDNTELIRRIEIQPKHIFWSDSGELVCIATEESFFILKYLSEKVLAAQETHEGVTEDGIEDAFEVLGEIQEIVK
TGLWVGDCFIYTSSVNRLNYYVGGEIVTIAHLDRTMYLLGYIPKDNRLYLGDKELNIISYSLLVSVLEYQTAVMR
RDFSMADKVLPTIPKEQRTRVAHFLEKQGFKQQALTVSTDPEHRFELALQLGELKIAYQLAVEAESEQKWKQLAE
LAISKCQFGLAQECLHHAQDYGGLLLLATASGNANMVNKLAEGAERDGKNNVAFMSYFLQGKVDACLELLIRTGR
LPEAAFLARTYLPSQVSRVVKLWRENLSKVNQKAAESLADPTEYENLFPGLKEAFVVEEWVKETHADLWPAKQYP
LVTPNEERNVMEEGKDFQPSRSTAQQELDGKPASPTPVIVASHTANKEEKSLLELEVDLDNLELEDIDTTDINLD

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 ${\tt MQRYNFHYLKYIVHFYRTCDYSRMIRMVLAYGELLLLIVSAEILFQWTNIVAWQQMPTFCGIAANLQETLVGFSF} \\ {\tt CFLCFFPLLLNQQGWKEGREVMNYSFQ}$

CGGTTGGCGTTCTGGGGCCTCAAACTCCTGGGCCTTGACCGGGCAGGCCGCGTCTCCCCGGGTGTGAGTCCACCG GGACCCGGCCGCCTAAGCGCGGGCGCCACAGAAGCGGCGCCCCGAAGACGCGCTCCTGGCTCGGCCCGAC AGCCTCGCTTGGCCGCCAGTTCTTCTGCAGCCGAAGGCGGTTGTTCTTTTAAAGAATTATTGAAGACGAAGGTTT TTTTCTTTTTTTTTTTTAATGGCTTTACAGAATCTTAAATAGAATACAGTTTGACATGACGGCAAAAAATGTTG GTTTGACTTCCACAAATGCAGAAGTAAGAGGATTTATAGATCAGAATCTCAGTCCAACAAAAGGCAACATTTCAT TTGTTGCATTTCCAGTTTCCAATACCAACTCACCTACAAAGATTTTACCAAAAACCTTAGGACCAATAAATGTGA ATGTTGGACCCCAAATGATTATAAGCACACCACAGAGACTAACCAGTTCAGGAAGTGTTCTGATTGGGAGTCCAT ATACCCCTGCACCAGCAATGGTTACTCAGACACACATAGCAGAAGCTACTGGGTGGTCCCTGGTGATAGAAAAC GGGCTAGAAAATTTATAGACTCTGATTTTTCAGAAAGTAAACGAAGCAAAAAAAGGAGATAAAAATGGGAAAGGCT TGAGACACTTTTCAATGAAAGTGTGTGAGAAAGTTCAACGAAAAGGTACAACATCGTACAATGAAGTCGCTGATG AGCTGGTGTCAGAGTTCACCAATTCAAATAACCATTTGGCTGCTGATTCGGCTTATGATCAGAAGAACATTAGGC TTGGCCTGCCTACCAATTCTGCTCAGGAATGTCAGAATCTGGAGATAGAGAAGCAGAGGCGGATAGAACGGATAA AGCAGAAGCGGGCCCAGCTGCAAGAACTTCTCCTACAGCAAATCGCTTTCAAAAAACCTGGTACAGAAAATCGAC AAAATGAGCAGCAAAACCAGGGCCCGGCCCGGCTCTGAACTCTACCATTCAGCTGCCATTCATAATCATCAATACAA GCAGAAAAACAGTCATAGATTGCAGCATCTCCAGTGACAAGTTTGAGTATCTTTTCAATTTTGACAACACCTTTG AGATCCATGATGACATAGAAGTACTAAAGCGGATGGGAATGTCGTTTGGCCTGGAGTCAGGCAAATGCTCTCTGG AGGATCTGAAACTTGCGAAATCCCTGGTGCCAAAGGCTTTAGAAGGTTATATCACAGATATCTCCACAGGACCTT CTTGGTTAAATCAGGGACTACTTCTGAACTCTACCCAATCAGTTTCAAATTTAGACCTGACCACTGGTGCCACCT TACCCCAGTCAAGTGTAAACCAAGGGTTATGCTTGGATGCAGAAGTGGCCTTAGCAACTGGGCAGTTCCTGGCCC ATGAAGATGAGGAAGATGATGAGGAGGATTCCTCCTCCCCAGAATAAAGACAAGAGAAAAGCCTACGTTTCAATAT TGTGTGTTCAGTGAAAACTAGAGAAACACAATAAGCAAATCACATGAAGGCTGAGATGATTGAGATGAAAGTTAA TGGGGATAATCCCTGAAGAGTTGGCAGTGTGAGTGCAACTCATTTATCTTCTGTGAGGTGGGATTTTTGTGTTCC TCACACCCATGTAATTATTCTTAGAATTGAGATTGCTACACGGAGCAGTCCTTGACGATCGTGTTTCTGACGTTT CTCTTCCTTGCCTGGACTGCCTTTGACAAGGCAGAAATGAACATGAAAAGTCCCCAGGAGAGGGGAGCTGTGTAG TGAGGGATACTGAGGGCAGTCCTGTGGCTGAGGGGCACAGATTGAACTGCTGAACTAGTTGGAGGTCTAGATGAG TTAGATAATTTATAGTAAAACTGAAATTATTATTAGCCAATGCATTGGTGCATAGAATTTACTAGGGCTACTTCT GGAAGCCAAAATAGAATAGCATTTCCATGTGCATTAAATACTTTGCCAGCACTGCCTTTGCCAGCATCCTAAATC TGGAGTTTTACAAAGAAGGAAACTGTATCTTTAGGTTAATCAAAGCTATGCATTTCATATAGCTTTTTCATTTAA CAGTGTGCAATTTGTGAAAATGAACCAAATGTCATTACTTTTGTCTTAAAGAAAAGTCTATTTCAAGAATATGAA CAGCAGTG

ACACACTCCCGCTTGGGCCTCCTCTCTCTCCCGGCTCCATTTTCTCCGCCGCGGGGGCCGGGGTCTCCTGT GGGGGGCCCAGCCGGTATCCCAGGTCTCCCTTCAGTGCCGGGGTGAACCCCCGGGGGAGCCGAGAGCCGGGGGCCA GGCTGAGCAGGGGGGGGCCTCAGGGCCCCCCCCAGCTATGGACTAACGGCTACTGGGGCCGCCTCCTCCAGGC GGGGCCCGGGGGGGCCTGGGATTGGTGAGTGGGGAGCCTGGGGGGCCCTGGCGAGCCTCCTGGTGGCGAGACCC CATCACCGACCAGAGCCTGGACGAGGCCCAGGCCAAGAAACACGCCCTAAACTGCCACCGAATGAAGCCTGCTCT CTTTAGCGTCCTGTGTGAAATCAAGGAGAAAACCGGCCTCAGCATTCGGAGCTCCCAGGAGGAGGAGCCGGTGGA $\tt CCCACAGCTGATGCGCTTGGACAACATGCTTCTGGCAGAGGGTGTGGCTGGGCCCGAGAAAGGGGGGCGGCTCAGC$ AGCAGCAGCTGCAGCCGCTGCAGCCTCTGGTGGTGGCGTGTCCCCTGACAACTCCATCGAACACTCGGACTATCG GACCCATGTCATGAACCTGCTGAGGGAGCAGAGCCGCACCAGGCCCGTGGCCCCCAAAGAGATGGAACGCATGGT GAGCATCATCCATCGAAAGTTCAGCGCCATCCAGATGCAGCTGAAGCAGCACCTGCGAGGCTATGATGATGCT GCGCTCCCGTTTCCTGGATGCCAGACGAAAGCGCCGTAACTTCAGCAGACAGGCCACTGAGGTCCTAAATGAGTA TTTCTACTCCCACCTGAGTAACCCATATCCTAGTGAGGAGGCCAAGGAGGAGCTTGCCAAGAAGTGTGGCATCAC CGTGTCTCAGGTCTCCAACCGGTTTGGCAACAAGAAGATTCGCTATAAGAAAAACATCGGAAAGTTCCAAGAGGA GGCAAACATCTATGCTGTCAAGACAGCCGTGTCAGTCACCCAGGGGGGGCCCACAGCAGCACCAGCTCCCCGACACC $\tt CCCTTCCTCTGCAGGCTCTTGGAGATATCTCAGGATCTGGAGACATGTTTCTGGGGATGCCTGGGCT$ CAACGGAGATTCCTATTCTGCTTCCCAGGTGGCATCACTCCGACGCTCGATGGGGCCCAGGGGGCTATGGGGATAA CCTCGGGGGAGGCCAGATGTACAGCCCACGGGAAATGAGGGCAAATGGCAGCTGGCAAGAGGCTGTGACCCCCTC TTCAGTGACATCCCCAACGGAGGGACCAGGGAGTGTTCACTCTGATACCTCCAACTGATCTTGCCCCTCAGGGTC ACAGGGGTGGGGGCTCTCACAAGGCGACTCTTGAAGAGGACGCAGGCTTCCAGAGGACAAACCCCAATACAGGAG CTTTCTTTCTTACACAGAAACATGCACATACCCAGAAACCTATTTTCTCAGACCCCTTTTTCTCCTCTGTCTTTC TCTCTCCCTCTCCCACACCTCACACACACATACTCCCACTTGCAACTATTCTGTTTCTCTCCTGGGCTCCCCAC TTTCCCTTCCCCACCCCACTTGTAGGCTCTGGAATCTGGAGACGCCAGCCCTGCCCAATCAGAGATGCCAAAAAT GGGGACATGACTTCTGGACAGAGGACATGGGACACGCCCCCATGCATCCCCACCCCTGCCCCTCCAGACAGCTTA $\tt CTTACCTCATACGCAGCTCATCTTAAACCAATAGAATCGCTTGGTGGACGAGAGTGTCTGACTCAGATATCTACCAGATATCTACCAGATATCTACCAGATATCTACCAGATATCTACCAGATATCTACCAGATATCTACCAGATATCTACCAGATATCTACCAGATATCTACCAGATATCTACCAGATATCTACCAGATATCTACCAGATATCTACCAGATATCTACCAGATATCTACCAGATATCTACCAGATATCTACCAGATATCTACCAGATATCTACCAGATATCTACAGATATCTACCAGATATCTACCAGATATCTACAGATATCAGA$ TGTCTTTTTTTTTTTTTTCTTACTTTCCCATATTAGGGGTGATAGCCAAAGGGGTTCTGGTAAGAGAAAGGGGGACA GGGCTTGCCCTGCTGGCCTCTCATCCCCCTTCTTCCCACAACCCTTGGGCAGGGCTGGACTCAGTAATTTTGAGG AAATTGAAGATGCCATCTTCCCCTGTGAGTGACATGTCTTTAATTTTTTAAAAAAACTCTATTTGAAAATTGGAGG GGGAAGAATGGGAAGGGAGTTATTGCCAAATATGTTAATTATGGGTTGGGGTGCTTGTATATGTATCTTCCTCAA AGATGTGGGGGAAAAGTAACATCAACACTGTCCCATCCTCAGCCCTGAACCCTACCATCTGATCCCCTCAGACAT TCTCAGGATTTTACAAGACTGTCAGAGTGGGGAACCCCTCCCATTAAAGATCCGGGCAGGACTGGGGACAGGTTG GAAATGTGATGGGTTGGGGGGGGGGGGCATGGGCCGGGGGCAGTTCTCTCCTCACTTGTAAACTTGTGTAGTTT CACAGAAAAAAAAATGCAGTTTTAAATAAAGAAATTTCTTT

GCCGGCCGCTATCCCCGGCTACCTGGGCCGCCCCGCGGCGTGCGCGTGAGAGGGAGCGCGCGGGCAGCCG CCGGCGCGCGCGCGTGGGGTGCAAACCCCGAGCGTCTACGCTGCCATGAGGGGGCGCGAACGCCTGGGCGCACT CTGCCTGCTGCTGCCGCCACCCAGCTCTCGCGGCAGCAGTCCCCAGAGAGACCTGTTTTCACATGTGGTGG CATTCTTACTGGAGAGTCTGGATTTATTGGCAGTGAAGGTTTTCCTGGAGTGTACCCTCCAAATAGCAAATGTAC TTGGAAAATCACAGTTCCCGAAGGAAAAGTAGTCGTTCTCAATTTCCGATTCATAGACCTCGAGAGTGACAACCT GTGCCGCTATGACTTTGTGGATGTGTACAATGGCCATGCCAATGGCCAGCGCATTGGCCGCTTCTGTGGCACTTT CCGGCCTGGAGCCCTTGTGTCCAGTGGCAACAAGATGATGGTGCAGATGATTTCTGATGCCAACACAGCTGGCAA TGGCTTCATGGCCATGTTCTCCGCTGCTGAACCAAACGAAAGAGGGGATCAGTATTGTGGAGGACTCCTTGACAG TGTAGCCCCAAAGAATCAGCTTATAGAATTAAAGTTTGAGAAGTTTGATGTGGAGCGAGATAACTACTGCCGATA TGATTATGTGGCTGTTTTAATGGCGGGGAAGTCAACGATGCTAGAAGAATTGGAAAGTATTGTGGTGATAGTCC ACCTGCGCCAATTGTGTCTGAGAGAATGAACTTCTTATTCAGTTTTTATCAGACTTAAGTTTAACTGCAGATGG GTTTATTGGTCACTACATATTCAGGCCAAAAAAACTGCCTACAACTACAGAACAGCCTGTCACCACCACATTCCC TTATTGTTCAAGTGACTTTGTATTAGCCGGCACTGTTATCACAACCATCACTCGCGATGGGAGTTTGCACGCCAC AGTCTCGATCATCAACATCTACAAAGAGGGAAATTTGGCGATTCAGCAGGCGGGCAAGAACATGAGTGCCAGGCT GACTGTCGTCTGCAAGCAGTGCCCTCTCCTCAGAAGAGGTCTAAATTACATTATTATGGGCCAAGTAGGTGAAGA TGGGCGAGGCAAAATCATGCCAAACAGCTTTATCATGATGTTCAAGACCAAGAATCAGAAGCTCCTGGATGCCTT ${\tt AAAAAATAAGCAATGT} \underline{{\tt TAA}} {\tt CAGTGAACTGTGTCCATTTAAGCTGTATTCTGCCATTGCCTTTGAAAGATCTATGT$ TCTCTCAGTAGAAAAAAAATACTTATAAAATTACATATTCTGAAAGAGCATTCCGAAAGATGGGACTGGTTGAC TCTTCACATGATGGAGGTATGAGGCCTCCGAGATAGCTGAGGGAAGTTCTTTGCCTGCTGTCAGAGGAGCAGCTA TCTGATTGGAAACCTGCCGACTTAGTGCGGTGATAGGAAGCTAAAAGTGTCAAGCGTTGACAGCCTTGGAAGCGTT AATATTTATAGTGTTATTTGTTTCACCTTCAAGCCTTTGCCCTGAGGTGTTACAATCTTGTCTTGCGTTTTCTAA

MRGANAWAPLCLLLAAATQLSRQQSPERPVFTCGGILTGESGFIGSEGFPGVYPPNSKCTWKITVPEGKVVVLNF RFIDLESDNLCRYDFVDVYNGHANGQRIGRFCGTFRPGALVSSGNKMMVQMISDANTAGNGFMAMFSAAEPNERG DQYCGGLLDRPSGSFKTPNWPDRDYPAGVTCVWHIVAPKNQLIELKFEKFDVERDNYCRYDYVAVFNGGEVNDAR RIGKYCGDSPPAPIVSERNELLIQFLSDLSLTADGFIGHYIFRPKKLPTTTEQPVTTTFPVTTGLKPTVALCQQK CRRTGTLEGNYCSSDFVLAGTVITTITRDGSLHATVSIINIYKEGNLAIQQAGKNMSARLTVVCKQCPLLRRGLN YIIMGQVGEDGRGKIMPNSFIMMFKTKNQKLLDALKNKQC

 ${\tt MTNTKGKRRATRYMFSRPFRKHGAVPLATYMRIYKKGDIVDIKGMGTVQKGMPHKCYHGKTGRVYNVTQHAVGIV\\ VNKQVKGKILAKRINVRIEHISHSKSRDSFLKCMKENDQKKKEAKEKGTWVQLKFQPAPPREAHFVRTNGKEPEL\\ LELIPYEFMA$

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1375/6881 FIGURE 1280A

 $\verb|CCGCGGGGGGGGCCGGCTTCACGTGACCCGGCGTCATTGGCTCGCTGGGGAAGTAGTCCTACATTCGCG|$ GTCAGCGCGGGGTCTCCGGGCGCCCTGCAGGGCGGCAGGCTGTGCCATCCCGCCGGACGTCGGGATGGTGCAGC TGTACAACCTGCACCCGTTCGGGTCGCAGCAGGTGGTGCCCTGCAAGCTGGAGCCGGACCGGTTCTGTGGCGGGG CGCGGTGCGCCTTCTCCACGCTGGGCCGGGTGTTGCGCCTGGCCTACAGCGAGGCTGGAGATTATTTGGTAGCAA TTGAAGAGAAAACAAAGCTACATTTCTACGTGCTTATGTGAACTGGAGAAATAAAAGGACTGAAAACTCTCGTG TGTGTATCCGAATGATTGGGCATAATGTGGAGGGACCATTCAGCAAAGCCTTCAGAGACCAGATGTACATTATTG AAATGCCGCTTTCGGAGGCCCCCTTGTGCATTTCCTGTTGCCCTGTGAAAGGAGACCTTCTCGTTGGCTGCACAA ATAAATTAGTCTTATTTAGTTTGAAGTACCAGATCATTAATGAGGAATTCTCACTATTGGACTTTGAACGTTCTT TAATTATACACATAGATAATATCACTCCTGTTGAGGTTTCTTTTTTGTGTTGGATATGTTGCTGTCATGTCAGACT TAGAAGTCTTAATCGTAAAACTGGAGTCAGGCCCTAAAAATGGAGAGAGTTCACCACCATCCACATAAGACCA ACAATCGAATAAGACGGACAGAAGAAGGCATCAGTAATGAAATTTCACAGCTTGAGTCAGATGATTTTGTCATCT GCCAGAAGCCCCTGGAACTTCTTGGTGAAAAAAGTGAACAGTCTGGATTATCTGTTACACTGGAGTCTACGGGAT TAGCTGATGAAAAAAGAAAATATTCCCACTTTCAGCACCTGCTCTATAGACGTTTTGCTCCTGATATTTCGTCCT ATGTCTTGTCTGATGACATCAAGCTACATTCCCTCCAGCTGCTACCCATTTACCAGACCGGTTCTCTTACATCTG ATGGAAAAATTTGTCTCAGGAAAAAGAATTGCTGAGTCTCTTTTGCTTTTTCTCCTTACCTCATGTGGGCTATC CGCCACAATTTTTGCACGTCATTACAAGTAACAACTGCAGTGTTTCACTGTGCGGTGCAGTGCGGCGGCAGCTC GTGAGGAGGACCCGTACATGGACACCACCCTGAAGGCTTGCCCACCTGTCAGTATGGATGTCTGTGCTTTAAGAA TACAGCTTTTCATAGGCTTGAAAGCCATCTGTCACTTTAAAAACCACATCATACTTTTGACTAAAGCAGAACCTG AAGCCATTCCAGAGAGAGACAGTCACCCAAGAGGCTTCTTTCGAGAAAAGATACCAGTGTTAAAATCAAAATAC CTCCTGTAGCTGAGGCTGGGTGGAATTTGTATATTGTGAATACGATCTCACCAGTGCAGCTGTACAAAGAGATGG TAGACTATAGCAATACCTATAAGACTGTCAAAACCCAGAGCTGCATTCACCTTCTCAGTGAGGCTCATCTGTTAG TGCGAGCTGCCCTGATGGATGCCAGTCAGCTGGAACCTGGAGAGAGGCAGAGCTTTTGGAAGCATTTAAGGAAA GCTGTGGGCACCTTGGGGACTGTTACAGCAGGCTTGACTCCCAGCATTCTCATCTCACCTTGCCATACTATAAGA GAGGATTAATCTTTTACATTAATCATTCACTTTATGAAAACCTGGATGAAGAATTAAATGAAGAATTAGCAGCAA AAGTGGTTCAGATGTTTTATGTGGCTGAGCCAAAGCAAGTGCCCCATATTCTCTGTAGTCCTTCTATGAAGAATA TTAATCCTTTAACTGCCATGAGCTATCTAAGGAAGCTGGATACTTCTGGGTTTTCATCGATCTTAGTGACATTGA CCAAGGCAGCAGTGGCTCTGAAAATGGGAGATCTTGACATGCACAGAAATGAAATGAAAAGCCATTCAGAGATGA AGTTGGTATGTGGCTTCATTCTGGAACCTCGGCTGTTGATTCAACAGAGAAAGGGACAGATTGTTCCAACCGAGC TTGCACTTCACTTGAAGGAAACTCAGCCTGGATTGCTTGTGGCTTCAGTTCTGGGCTTGCAGAAGAACAACAAAA TTGGAATTGAAGAAGCAGATTCCTTTTTTAAGGTGCTTTGTGCTAAGGATGAAGATACAATTCCTCAGCTCTTGG TAGACTTTTGGGAAGCTCAGCTAGTGGCATGTCTCCCAGATGTGGTACTTCAGGAACTCTTTTTCAAACTCACAT CACAGTACATCTGGAGATTGTCTAAGAGGCAGCCTCCTGACACCACACCATTGCGAACATCGGAGGATCTGATAA ATGCCTGTAGTCATTATGGCTTAATTTATCCATGGGTTCACGTCGTAATATCATCTGATTCTTTAGCTGATAAAA ATTATACAGAAGATCTTTCAAAATTACAGTCTCTTATATGTGGTCCTTCATTTGACATAGCTTCCATTATTCCGT TCTTGGAGCCACTTTCAGAAGACACTATTGCCGGCCTCAGTGTCCATGTTCTGTGTCGTACACGCTTGAAAGAGT ATGAACAGTGCATAGACATACTGTTAGAGAGATGCCCGGAGGCAGTCATTCCATATGCTAATCATGAACTGAAAG AAGAGAACCGGACTCTGTGGTGGAAAAAACTGTTGCCTGAACTTTGTCAGAGAATAAAATGTGGTGGAGAAAAGT ATCAACTCTACCTGTCATCATTAAAAGAAACATTGTCAATTGTTGCTGTGGAACTAGAACTGAAGGATTTCATGA CTTAAAGGTATCATTTGAAAAATACCATAATGGCATTTGAGACTGAATTTCTAAAAATTGAATGCCAAAGTACAA TGTCTAGAATGTAAAAAGTCTTTAAGACATAAGAATTCCTCAAAGAAGCCATACATTTTTTAAGGTGGGGATTGA CTTTTATTCCAAGGAACAACATCAGTTCACTGTTGTTGGAGACATGACAATCATTTTCATCCCAAGAACACTTTA AGGAAACATTTTACAAGTATGCTTGAAAGAATGTCACTAACTGGTCCAGAATTTTATCTTCTTGATTTTTCCAGA

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1376/6881 FIGURE 1280B

MVQLYNLHPFGSQQVVPCKLEPDRFCGGGRDALFVAAGCKVEAFAVAGQELCQPRCAFSTLGRVLRLAYSEAGDY
LVAIEEKNKATFLRAYVNWRNKRTENSRVCIRMIGHNVEGPFSKAFRDQMYIIEMPLSEAPLCISCCPVKGDLLV
GCTNKLVLFSLKYQIINEEFSLLDFERSLIIHIDNITPVEVSFCVGYVAVMSDLEVLIVKLESGPKNGERVHHHP
HKTNNRIRRTEEGISNEISQLESDDFVICQKPLELLGEKSEQSGLSVTLESTGLADEKRKYSHFQHLLYRRFAPD
ISSYVLSDDIKLHSLQLLPIYQTGSLTSDGKNLSQEKELLSLFCFFSLPHVGYLYMVVKSVELMSVYQYPEKSQQ
AVLTPQFLHVITSNNLQCFTVRCSAAAAREEDPYMDTTLKACPPVSMDVCALRIQLFIGLKAICHFKNHIILLTK
AEPEAIPERRQSPKRLLSRKDTSVKIKIPPVAEAGWNLYIVNTISPVQLYKEMVDYSNTYKTVKTQSCIHLLSEA
HLLVRAALMDASQLEPGEKAELLEAFKESCGHLGDCYSRLDSQHSHLTLPYYKMSGLSMAEVLARTDWTVEDGLQ
KYERGLIFYINHSLYENLDEELNEELAAKVVQMFYVAEPKQVPHILCSPSMKNINPLTAMSYLRKLDTSGFSSIL
VTLTKAAVALKMGDLDMHRNEMKSHSEMKLVCGFILEPRLLIQQRKGQIVPTELALHLKETQPGLLVASVLGLQK
NNKIGIEEADSFFKVLCAKDEDTIPQLLVDFWEAQLVACLPDVVLQELFFKLTSQYIWRLSKRQPPDTTPLRTSE
DLINACSHYGLIYPWVHVVISSDSLADKNYTEDLSKLQSLICGPSFDIASIIPFLEPLSEDTIAGLSVHVLCRTR
LKEYEQCIDILLERCPEAVIPYANHELKEENRTLWWKKLLPELCQRIKCGGEKYQLYLSSLKETLSIVAVELELK
DFMNVLPEDGTATFFLPYLLYCSRKKPLT

GGCACGAGGGCTTCTCCTGCGCCTCCTTTTCGCCCAGCACTAGCGCCTTAGGCCAGCTCGGGGGATGTGAGAGCC GAAGCCCTTAGACTGCCAGGCACAGAGTCGGGTCGGGATTTGTCAGCCAAGCCTCGGCTCCAGCTCCGCAATCTC ${\tt TCGCTGCCCGCCCAGAAGATG}{\tt AATCCGGCCTCGGCGCCCCCCTCCGCTCCGCCGCCTGGGCAGCAAGTGATCCAC}$ GTCACGCAGGACCTAGACACAGACCTCGAAGCCCTCTTCAACTCTGTCATGAATCCGAAGCCTAGCTCGTGGCGG AAGAAGATCCTGCCGGAGTCTTTCTTTAAGGAGCCTGATTCGGGCTCGCACTCGCGCCAGTCCAGCACCGACTCG TCGGGCGGCCACCCGGGGCCTCGACTGGCTGGGGGTGCCCAGCATGTCCGCTCGCACTCGTCGCCCGCGTCCCTG CAGCTGGGCACCGGGGGGGGTGCTGCGGGTAGCCCCGCGCAGCAGCACCGCGCACCTCCGCCAGCAGTCCTACGAC GTGACCGACGAGCTGCCACTGCCCCCGGGCTGGGAGATGACCTTCACGGCCACTGGCCAGAGGTACTTCCTCAAT CACATAGAAAAATCACCACATGGCAAGACCCTAGGAAGGCGATGAATCAGCCTCTGAATCATATGAACCTCCAC CCTGCCGTCAGTTCCACACCAGTGCCTCAGAGGTCCATGGCAGTATCCCAGCCAAATCTCGTGATGAATCACCAA AGTATGCCCAATGCGCTGACCACTCAGCAGCAGCAGCAGCAGAAACTGCGGCTTCAGAGAATCCAGATGGAGAGA GAAAGGATTCGAATGCGCCAAGAGGGGCTCATGAGGCAGGAAGCTGCCCTCTGTCGACAGCTCCCCATGGAAGCT AGCTCAGATCCTTTCCTCAATGGAGGGCCATATCATTCGAGGGAGCAGAGCACTGACAGTGGCCTGGGGTTAGGG TGCTACAGTGTCCCCACAACTCCGGAGGACTTCCTCAGCAATGTGGATGAGATGGATACAGGAGAAAACGCAGGA CAAACACCCATGAACATCAATCCCCAACAGACCCGTTTCCCTGATTTCCTTGACTGTCTTCCAGGAACAAACGTT GACTTAGGAACTTTGGAATCTGAAGACCTGATCCCCCTCTTCAATGATGTAGAGTCTGCTCTGAACAAAAGTGAG $\texttt{CCCTTTCTAACCTGGCTG} \underline{\textbf{TAA}} \\ \texttt{TCACTACCATTGTAACTTGGATGTAGCCATGACCTTACATTTCCTGGGCCTCTT}$ GGAAAAAGTGATGGAGCAGAGCAAGTCTGCAGGTGCACCACTTCCCGCCTCCATGACTCGTGCTCCCTCTTTTT TCTCTTCTCTCTCTCCCCCCATGGCTAAGCTTTATGGGTGTTAATTGAAATTTATACACCAATTGATTTTAAA CCATAAAAAGCTGACCACAGGCAGTTACTTCTGAGGGCATCTTGGTCCAGGAAATGTGCACAAAATTCGACCTGA TTTACAGTTTCAAAAACTGTATTGATGACAGTAGTACCAAATGCTTTAAAAACTATTTAACTTGAGCTTTAAAAA

MNPASAPPPLPPPGQQVIHVTQDLDTDLEALFNSVMNPKPSSWRKKILPESFFKEPDSGSHSRQSSTDSSGGHPG PRLAGGAQHVRSHSSPASLQLGTGAGAAGSPAQQHAHLRQQSYDVTDELPLPPGWEMTFTATGQRYFLNHIEKIT TWQDPRKAMNQPLNHMNLHPAVSSTPVPQRSMAVSQPNLVMNHQHQQQMAPSTLSQQNHPTQNPPAGLMSMPNAL TTQQQQQQKLRLQRIQMERERIRMRQEELMRQEAALCRQLPMEAETLAPVQAAVNPPTMTPDMRSITNNSSDPFL NGGPYHSREQSTDSGLGLGCYSVPTTPEDFLSNVDEMDTGENAGQTPMNINPQQTRFPDFLDCLPGTNVDLGTLE SEDLIPLFNDVESALNKSEPFLTWL

GGTGGCGCCGCGAAG<u>ATG</u>GTCGCCAAGCAAAGGATCCGTATGGCCAACGAGAAGCACAGCAAGAACATCACCCAG TTCATTTTTGTTGTCTGTGGTTCTGCAATTTTCCAGATTATTCAAAGTATCAGGATGGGCATG<u>TGA</u>AGTGACTGA CCTTAAGATGTTTCCATTCTCCTGTGAATTTTAACTTGAACTCATTCCTGATGTTTGATACCCTGGTTGAAAACA ATTCAGTAAAGCATCCTGCCTCAGAATGACTTTCCTATCATGCTTCATGTGTCATTCCAAGGTTTCTTCATGAGT CATTCCAAGTTTTCTAGTCCATACCACAGTGCCTTGCAAAAAACACCACATGAATAAAGCAATAAAATTTGATTG TTAAGATACAGTAGTGGACCCTACTTATTCAGTCAATTAAGAGTAAGTTTTTTTATGTGGTTATTAAAACAGTAT GAACAATTAGTCTAACTCTGCATAGACAGGGTCTAGATTTTGTTAACCCAAATGTATAACTGCAGTTAGCTTAAA TTACAATTTGAAGTCTTGTGGTTTTTATATAGCTAGGCACTTTATTACTCTTTTTGAACTGAAAGCACACTCCCTT ATAGGTTCATGTAACTGTCCTGTAATAAGGTGCTTATAAATGGAACAACTACACAGCCTAGTTTTGCCACAACCT TTAGCATCTAAAAAGTTTTAAAAGCTTCTAAATGTCTAATATAAAGGGAGATGCTTATAGCCACAACATCTATTT GGAAGGTTTGTTTATGTTACATTTATTTCACCAGAACTATTTTAATATATCAAAGGGGTTTACTATGCCAAACAA AATTCTAGGGAAAAATACTGCTAAAAATGGATGCCTCATCAGAACATGCTGTTGAGTCCAATGTGCCATAAGACA TTTTAGCATGTTAAATAGCACTTTTAATAGCAAAAAAAAGGCACATCAACTGCGAAGTTATCCTTAGTTTGCAAAT GCTTTTTCTAGATTAATGATTTTTCAATCATTAGGGTACTAGACACATCAGCCTAAAGTGGCATCTGGAATTGAA ACGTTTTACTAATGGTAAGGGTGAGGGTCATAGGGCAGGTTTTGGGTTTTCTAGTACTGTTGAAAACTGCAAGTA GAAAGCTGCTTGTGTTTGCTTAATTGCCTCAGGATATTTCTTTTAAAATAAGCTGTTTTAAAAGAGGAACAGA AGGGAAATCTGCTACCTAGTCTATACACAGCGTGAACCTCACAGGGGGCTTCTGATACCCTCAAACATGGAGAAC GGCCAGCAGGTTTTTAACTAAATTGTTACTTGCCTTTCTCACCCAGTTAATCAGTCTCTGTACTTGTTTCCCTTT TTGAAACAAGTGTCTTGGTTAACTAATTCTGTTTTATGGTTGTCTAAATTCATAGCAGGTGCCTTATTCTTTGC TTTTAGTCAAACCATTCCATATCAGAATTTTCCTTGGTTTACTATAGATATTTGGCTTTAAGTTGTTTTTGTGT ATTGCATTCCCTTTGTATTTCATGTGTAATTCACCAATTAAGTGCAGTTTATATTCAGGTTGGATTATGCATGTT AAAAAAAAAAA

 ${\tt MVAKQRIRMANEKHSKNITQRGNVAKTSRNAPEEKASVGPWLLALFIFVVCGSAIFQIIQSIRMGM}$

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FIGURE 1286

GCATGAGGAGACGTGTAGGGGCCGGGTTCGGCCCTGGTGAACTCTCACCCGAGCGGTTTCTCTTTCCGGGACAAC XXXXXXXXXXXXXXXXXXXXXGGAATCTGGGAAGAATTGCAAAGTCTGTATCTTTAGTAAGGATGGGACCTTG TTTGCCTGGGGCAATGGAGAAAAGTAAATATTATCAGTGTCACTAACAAGGGACTACTGCACTCCTTCGACCTC CTGAAGGCAGTTTGCCTTGAATTCTCACCCAAAAATACTGTCCTGGCAACGTGGCAGCCTTACACTACTTCTAAA GATGGCACAGCTGGGATACCCAACCTACAACTTTATGATGTGAAAACTGGGACATGTTTGAAATCTTTCATCCAG AAAAAATGCAAAATTGGTGTCCATCCTGGTCAGAAGATGAAACTCTTTGTGCCCGCAATGTTAACAATGAAGTT TCACCTGGACCCCAACCATACAAGGTGGCTGTCTATGTTCCAGGAAGTAAAGGTGCACCTTCATTTGTTAGATTA TATCAGTACCCCAACTTTGCTGGACCTCATGCAGCTTTAGCTAATAAAAGTTTCTTTAAGGCAGATAAAGTTACA TATGGAGAACAACTCTACACTACATTGCAACAAATGGAGAAAGTGCTGTAGTGCAATTACCAAAAAATGGCCCC ATTTTCAACTTGAAATGTGATCCTGTATTTGACTTTGGAACTGGTCCTCGTAATGCAGCCTACTATAGCCCTCAT GGACATATATTAGTATTAGCTGGATTTGGAAATCTGAGGGGACAAATGGAAGTGTGGGATGTGAAAAAACTACAAA $\tt CTTATTTCTAAACCGGTGGCTTCTGATTCTACATATTTTGCTTGGTGCCCGGATGGTGAGCATATTTTAACAGCT$ ${\tt ACATGTGCTCCCAGGTTACGGGTTAATAATGGATACAAAATTTGGCATTATAGTGGCTCTATCTTGCACAAGTAT}$ ATAACTTACCAAGCAGTTCCAAGTGAAGTACCCAATGAGGAACCTAAAGTTGCAACAGCTTATAGACCCCCAGCT TTAAGAAATAAACCAATCACCAATTCCAAATTGCATGAAGAGGAACCACCTCAGAATATGAAACCACAATCAGGA AACGATAAGCCATTATCAAAAACAGCTCTTAAAAATCAAAGGAAGCATGAAGCTAAGAAAGCTGCAAAGCAGGAA GCAAGAAGTGACAAGAGTCCAGATTTGGCACCTACTCCTGCCCCACAGAGCACACCACGAAACACTGTCTCTCAG TCAATTTCTGGGGACCCTGAGATAGACAAAAAAATCAAGAACCTAAAGAAGAAACTGAAAGCAATCGAACAACTG AAAGAACAAGCAGCAACTGGAAAAACAGCTAGAAAAAAATCAG

MQNWCPSWSEDETLCARNVNNEVHFFENNNFNTIANKLHLQKINDFVLSPGPQPYKVAVYVPGSKGAPSFVRLYQ
YPNFAGPHAALANKSFFKADKVTMLWNKKATAVLVIASTDVDKTGASYYGEQTLHYIATNGESAVVQLPKNGPIY
DVVWNSSSTEFCAVYGFMPAKATIFNLKCDPVFDFGTGPRNAAYYSPHGHILVLAGFGNLRGQMEVWDVKNYKLI
SKPVASDSTYFAWCPDGEHILTATCAPRLRVNNGYKIWHYTGSILHKYDVPSNAELWQVSWQPFLDGIFPAKTIT
YQAVPSEVPNEEPKVATAYRPPALRNKPITNSKLHEEEPPQNMKPQSGNDKPLSKTALKNQRKHEAKKAAKQEAR
SDKSPDLAPTPAPQSTPRNTVSQSISGDPEIDKKIKNLKKKLKAIEQLKEQAATGKQLEKNQLEKIQKETALLQE
LEDLELGI

1384/6881 FIGURE 1288A

GGCCGTTGCTCCAGGGAGAACTGCAAATATCTTCATCCACCCCCACATTTAAAAACGCAGTTGGAGATAAATGGA CGCAATAACTTGATTCAGCAGAAGAACATGGCCATGTTGGCCCAGCAAATGCAACTAGCCAATGCCATGATGCCT GGTGCCCCATTACAACCCGTGCCAATGTTTTCAGTTGCACCAAGCTTAGCCACCAATGCATCAGCAGCCGCCTTT AATCCCTATCTGGGACCTGTTTCTCCAAGCCTGGTCCCGGCAGAGATCTTGCCGACTGCACCAATGTTGGTTACA GTATGTCGAGAGTACCAACGTGGCAATTGCAACCGAGGAGAAAATGATTGTCGGTTTGCTCATCCTGCTGACAGC ACAATGATTGACACCAATGACAACACGTCACTGTGTGTATGGATTACATCAAAGGGAGATGCTCTCGGGAAAAG TGCAAATACTTTCATCCCCTGCACATTTGCAAGCCAAGATCAAGGCTGCCCAATACCAGGTCAACCAGGCTGCA GCTGCACAGGCTGCAGCCGCCAGCTGCCATGACTCAGTCGGCTGTCAAATCACTGAAGCGACCCCTCGAGGCA ACCTTTGACCTGGGAATTCCTCAAGCTGTACTTCCCCCATTACCAAAGAGGCCTGCTCTTGAAAAAACCAACGGT GCCACCGCAGTCTTTAACACTGGTATTTTCCAATACCAACAGGCTCTAGCCAACATGCAGTTACAACAGCATACA AGTGTTCCCTTCGCTGCAACAGCCACAGCCAACCAGATACCCATAATATCTGCCGAACATCTGACTAGCCACAAG TATGTTACCCAGATGTAGAATTTTCATCACTAAACAATCATGCTAAAGAGGAAAGGACAGTGTGCTTGGTTAGAG CCACATATTGCATGTTAACCAGAAGAAAAGACAACATTTTCCGGAAATCCACTGCACACTGTTGCCTATACACTT TGTAACCATGATTCTATTATGTATTGGTACGTCTGTAGACCAAGATATAATTTTTTAAAAATAAGTTTATTTCTT TGTGCCAAGCAAAACCACAACTGTGTATATTTTAAAGCACATCATGGCTTTAAGTACCATGTTGTTAAGGATTCT CATGAAGTGCCATAGACTGTACATCAAATTAGAGTATTATTTCTTCAGTGTTATTGTTTTCAGAGCCACATTTTG AAATGGCCAATTTAACTTTACAGTAACAATAGACAGCACAACACAACTCTCTCAATACAGATAAACTCACACAT ACTGGAGATATATATATAGATATATATAAAATTATTTTAATGCATTGTAGTGTAATATTTTATGCATACTATA CTGTATAACATGTTATTCAAAAGGGATTGCCATTTCTGAGACACAGTAACAAAAAATGAGGAAATTATTTTGCT TCTATTTATAGCCTCTGTCAAAAGTCAAAAGACTATAAATGCTTTGCAAAAATGGTTTCACGTTTGCTTAAATGC TTCATCACAGTCACATTCAAAATAGTGACTCTAAACAAAGAAGAAGCAGCACTGTCATCAGATGCATGATAAAC AATAGATGTGCATTCAGTTTTTAAGAATGGAATCATCCAAAGGAATTCCTTTTTTTGAGGTTTTGGATGTTGCAGC TAGTAAAGGATATTTTTGCTCTGTTCAGCAGTTCTAAAAATTGCTGAAGTAGGGGCCAGGTCACTGGTAGTTATA GTATGGAATGGGAGAAGTGAAAGTTCAGTTATAGAACTTTCCATACTTCCAAGTTTACTGCAAGTTTTTATGCTT GAGAGAGATGCTTTCTAATATAAGACTGATGTTGTATTTACTGATTTGTACTGTACATCTATTAAAGCCTTAGA TTATTACATTACGGGTTGGAACCCATACCAATGTAATTTCAATCGTGTTAAGAAAGTAATGGTGACTTCACATGT TATTGTAGTTAGTTACATTATAGAATATTACTTATTTTCTTGTTAAAATGTAGTTTTTCATTTCCTACATTTAT TAGATTTTCATTTCTATTAACAATTGAATACCATTTCAGTTTATAGACTTGTTTTATTAGATTTTACCAATGAA TTTTTCAAAATACAAAAAAAGTAGTTTTTCCTTCATAACATACTCAGTTTTGAATTACATGTAGTGTCACATGA GTTCTTGTCTAGTTTTCATTAAAAGAACAAAGATCTTTTATATGGATATCTTATAAATATAATCATTGCTAAG TAGAACAAGGGACTTTTTGTTGATAATCCAAATACTCAAAGTTTACGTAATGAAAATTATAGCGTGTGTGCAAAC TCTTGAGGGTTGATTATGCTGCAATTTAGCATGTTGGAACGTCTAGGGAGAAGGTTGACTTTTTGCACTTCTGTA TATAGTCAAAAGAGAGAAACCTGTATAATAGTAAGATCTTATTTTGAATAAAAACGTCTATAATTACAAGGAGTT

1385/6881 FIGURE 1288B

ATGTGGAGAAGCCAGGGGACCCACAGAAGGCTGCCTGTGGCCACGTCATAGCAAAGGAACTTTATGGAGAGGAG CAGGAAGTCAGAGAGCCAGCTGAATTCAAGAATCTGATAGGAGAGAAGATGTCAGTCCCTCTGGAAGAAGTTAGC AAAGTTGTGGCCTTGAATGGGAAGGGACAGAAGAGAGGGTTCAGGGTTCGAGGCTGAGGCAACAGGAAACTGCCTG GAATGGAACTTGCCAAGGGGGATAGGAGGTGCAGGCCGGGGCCTCTTGGGAGAAAGAGCTGCACCATCTTCCAAC CAGGCATTGTGCATACAGACCTACCCAGAGAAGCCAGTATCCATGGCTTTGGAGAGTTCAAATATTCAATTTTCC GTTCAAAAAAAGGCCACGGCCAAGAGTTCCGCCAGGGGCCCAGCTCTCAGGAGGCCTCTTCGGTGCCGC CAGCCTCCCGAAGTCATCCAAGGTAGCAGGCAAATCCGGCAGCAGCAAACTAGCTCGGATTCGGCTTCTGTTTTT CGACCCTTCCGGCACCCTCCCGCCCCGTCTCGTACTGTCGCCGTCACCGCCGCGGCTCCGGCCCTGGCCCCGATG GCTCTGTGCAACGGAGACTCCAAGCCTTGGGCTCCGCGGCGGTTAGGCCGGTTCTGGACGAACCCCTCGGAGCTG CACTGTCTTCCCCCTCCCCCAACGCCCCTGCAGGCCCGCGTGAGGGCTGGTGGCCCCAGGGTCGCGCACTCCGTT $\verb|CTCCCTCCCGCTTCCTTCTCAGAGAGGAAAGGGTGTGTCCAGGTCCCGCCTCCGTCCAGCTTGCTCCCTGTC| \\$ ${\tt CGTTTGACCGCTGCTCATCTCTCCCAACTCACTTTTCTTAGACCGTTCCTCTTACTTTCGTCCCGCTTTT}$

AGTAATACTGAAGAATTTCCTTTATGATATAGCTGGATGCAGTGGAACCTTCACCGTGCAGAACAGAGAACTTGA GTGTATTCGAGAGATCAAAGAGAGAGTAGGCACGTCAAAAGTTTTGGTTTTACTCAGTGGTGGAGTAGACTCAAC AGTTTGTACAGCTTTGCTAAATCGTGCTTTGAACCAAGAACAAGTCATTGCTGTGCACATTGATAATGGCTTTAT GAGAAAACGAGAAAGCCAGTCTGTTGAAGAGGCCCTCAAAAAGCTTGGAATTCAGGTCAAAGTGATAAATGCTGC TCATTCTTCTACAATGGAACAACACCCTACCAATATCAGATGAAGATAGAACCCCACGGAAAAGAATTAGCAA AGTAATTGGAGAAATGAACTTGAAACCAGAGGAGGTTTTCCTTGCCCAAGGTACTTTACGGCCTGATCTAATTGA AAGTGCATCCCTTGTTGCAAGTGGCAAAGCTGAACTCATCAAAACCCATCACAATGACACAGAGCTCATCAGAAA GTTGAGAGAGGAGGGAAAAGTAATAGAACCTCTGAAAGATTTTCATAAAGATGAAGTGAGAATTTTGGGCAGAGA ACTTGGACTTCCAGAAGAGTTAGTTTCCAGGCATCCATTTCCAGGTCCTGGCCTGGCAATCAGAGTAATATGTGC TGAAGAACCTTATATTTGTAAGGACTTTCCTGAAACCAACAATATTTTGAAAATAGTAGCTGATTTTTCTGCAAG TGTTAAAAAGCCACATACCCTATTACAGAGAGTCAAAGCCTGCACAACAGAAGAGGATCAGGAGAAGCTGATGCA AATTACCAGTCTGCATTCACTGAATGCCTTCTTGCTGCCAATTAAAACTGTAGGTGTGCAGGGTGACTGTCGTTC CTACAGTTACGTGTGGGAATCTCCAGTAAAGATGAACCTGACTGGGAATCACTTATTTTTCTGGCTAGGCTTAT ACCTCGCATGTGTCACAACGTTAACAGAGTTGTTTATATATTTGGCCCACCAGTTAAAGAACCTCCTACAGATGT TACTCCCACTTTCTTGACAACAGGGGTGCTCAGTACTTTACGCCAAGCTGATTTTGAGGCCCATAACATTCTCAG GGAGTCTGGGTATGCTGGGAAAATCAGCCAGATGCCGGTGATTTTGACACCATTACATTTTGATCGGGACCCACT TCAAAAGCAGCCTTCATGCCAGAGATCTGTGGTTATTCGAACCTTTATTACTAGTGACTTCATGACTGGTATACC TGCAACACCTGGCAATGAGATCCCTGTAGAGGTGGTATTAAAGATGGTCACTGAGATTAAGAAGATTCCTGGTAT TTCTCGAATTATGTATGACTTAACATCAAAGCCCCCAGGAACTACTGAGTGGGAGTAATAAACTTC

1389/6881 FIGURE 1292A

GATGAAGAGGAAGAAATCAAACAAGAAATTAACATGTTGAAGAAATATTCTCATCACCGGAATATTGCTACATAC GGCTCTGTCACCGACCTGATCAAGAACACAAAAGGTAACACGTTGAAAGAGGAGTGGATTGCATACATCTGCAGG GAAATCTTACGGGGGCTGAGTCACCTGCACCAGCATAAAGTGATTCATCGAGATATTAAAGGGCAAAATGTCTTG CTGACTGAAAATGCAGAAGTTAAACTAGTGGACTTTGGAGTCAGTGCTCAGCTTGATCGAACAGTGGGCAGGAGG AATACTTTCATTGGAACTCCCTACTGGATGGCACCAGAAGTTATTGCCTGTGATGAAAACCCAGATGCCACATAT GATTTCAAGAGTGACTTGTGGTCTTTGGGTATCACCGCCATTGAAATGGCAGAAGGTGCTCCCCCTCTCTGTGAC ATGCACCCCATGAGAGCTCTCTTCCTCATCCCCGGAACCCAGCGCCTCGGCTGAAGTCTAAGAAGTGGTCAAAA CATCCATTTATACGAGACCAACCTAATGAGCGACAGGTCCGCATTCAACTCAAGGACCATATTGATAGAACAAAG AAGAAGCGAGGAGAAAAAGATGAGACAGAGTATGAGTACAGTGGAAGTGAGGAAGAAGAGGAGGAGAATGACTCA GGAGAGCCCAGCTCCATCCTGAATCTGCCAGGGGAGTCGACGCTGCGGAGGGACTTTCTGAGGCTGCAGCTGGCC AACAAGGAGCGTTCTGAGGCCTACGGAGGCAGCAGCTGGAGCAGCAGCAGCGGGAGAATGAGGAGCACAAGCGGC AGCTGCTGGCCGAGCGTCAGAAGCGCATCGAGGAGCAGAAAGAGCAGAGGCGGCGGCTGGAGGAGCAACAAAGGC GAGAGAAGGAGCTGCGGAAGCAGCAGGAGAGGGAGCAGCCGGCACTATGAGGAGCAGATGCGCCGGGAGGAGG AGAGGAGGCGTGCGGAGCATGAACAGGAATACATCAGGCGACAGTTAGAGGAGGAGCAGAGACAGTTAGAGATCT TGCAGCAGCTACTGCATGAACAAGCTCTACTTCTGGAATATAAGCGCAAACAATTGGAAGAACAGAGACAAG CAGAAAGACTGCAGAGGCAGCTAAAGCAAGAAAGAGACTACTTAGTTTCCCTTCAGCATCAGCGGCAGGAGCAGA GGCCTGTGGAGAAGAAGCCACTGTACCATTACAAAGAAGGAATGAGTCCTAGTGAGAAGCCAGCATGGGCCAAGG AGGTAGAAGAACGGTCAAGGCTCAACCGGCAAAGTTCCCCTGCCATGCCTCACAAGGTTGCCAACAGGATATCTG ACCCCAACCTGCCCCCAAGGTCGGAGTCCTTCAGCATTAGTGGAGTTCAGCCTGCTCGAACACCCCCCATGCTCA GACCAGTCGATCCCAGATCCCACATCTGGTAGCTGTAAAATCCCAGGGACCTGCCTTGACCGCCTCCCAGTCAG TGCACGAGCAGCCCACAAAGGGCCTCTCTGGGTTTCAGGAGGCTCTGAACGTGACCTCCCACCGCGTGGAGATGC CACGCCAGAACTCAGATCCCACCTCGGAAAATCCTCCTCTCCCCACTCGCATTGAAAAGTTTGACCGAAGCTCTT GGTTACGACAGGAAGAAGACATTCCACCAAAGGTGCCTCAAAGAACAACTTCTATATCCCCAGCATTAGCCAGAA TCCGGAGAACTGAGCCCATCTTGGAGAGCCCCTTGCAGAGGACCAGCAGTGGCAGTTCCTCCAGCTCCAGCACCC CTAGCTCCCAGCCCAGCTCCCAAGGAGGCTCCCAGCCTGGATCACAAGCAGGATCCAGTGAACGCACCAGAGTTC GAGCCAACAGTAAGTCAGAAGGATCACCTGTGCTCCCCCATGAGCCTGCGAAGGTGAAACCAGAAGAATCCAGGG ACATTACCCGGCCCAGTCGACCAGCTAGCTACAAAAAAGCTATAGATGAGGATCTGACGGCATTAGCCAAAGAAC TAAGAGAACTCCGGATTGAAGAACAAACCGCCCAATGAAGAAGGTGACTGATTACTCCTCCTCCAGTGAGGAGT CAGAAAGTAGCGAGGAAGAGGGAGAGAGGGAGAGCCGAGACCCATGATGGGACAGTGGCTGTCAGCGACATAC CCAGACTGATACCAACAGGAGCTCCAGGCAGCAACGAGCAGTACAATGTGGGAATGGTGGGGACGCATGGGCTGG AGAAGAAGCGATCTGGCCACAGTGACAGCAATGGCTTTGCTGGCCACATCAACCTCCCTGACCTGGTGCAGCAGA GCCATTCTCCAGCTGGAACCCCGACTGAGGGACTGGGGGCGCGTCTCAACCCATTCCCAGGAGATGGACTCTGGGA CTGAATATGGCATGGGGAGCAGCACCAAAGCCTCCTTCACCCCCTTTGTGGACCCCAGAGTATACCAGACGTCTC CCACTGATGAAGATGAAGAGGATGAGGAATCATCAGCCGCAGCTCTGTTTACTAGCGAACTTCTTAGGCAAGAAC CACCAGAAATCAGAAAATACAAGAAACGATTCAACTCAGAAATACTTTGTGCAGCTCTGTGGGGTGTAAACCTTC TGGTGGGGACTGAAAATGGCCTGATGCTTTTGGACCGAAGTGGGCAAAGTCTATAATCTGATCAACCGGA GGCGATTTCAGCAGATGGATGTGCTAGAGGGACTGAATGTCCTTGTGACAATTTCAGGAAAGAAGAATAAGCTAC TCACTGTTGGGGACTTGGAAGGCTGTATACATTATAAAGTTGTTAAATATGAAAGGATCAAATTTTTGGTGATTG CCTTAAAGAATGCTGTGGAAATATATGCTTGGGCTCCTAAACCGTATCATAAATTCATGGCATTTAAGTCTTTTG CAGATCTCCAGCACAAGCCTCTGCTAGTTGATCTCACGGTAGAAGAAGGTCAAAGATTAAAGGTTATTTTTGGTT CACACACTGGTTTCCATGTAATTGATGTTGATTCAGGAAACTCTTATGATATCTACATACCATCTCATATTCAGG GCAATATCACTCCTCATGCTATTGTCATCTTGCCTAAAACAGATGGAAATGCAAATGCTTGTTTGCTATGAGGATG

1390/6881 FIGURE 1292B

AGGGGGTGTATGTAAACACCTATGGCCGGATAACTAAGGATGTGGTGCTCCAATGGGGAGAAATGCCCACGTCTG TGGCCTACATTCATTCCAATCAGATAATGGGCTGGGGCGAGAAAGCTATTGAGATCCGGTCAGTGGAAACAGGAC TTGCATCCGTGCGATCTGGAGGAAGTAGCCAAGTGTTTTTCATGACCCTCAACAGAAATTCCATGATGAACTGGT AACAGAAGAGCACTTGGCACTTATCTTCATGGCGTTATTTCTAATTTAAAAGAACATAACTCATGTGGACTTATG GTACAGTCCATCTTTCAATGTTGCAGCCTGGTTGAGAAGGAGAAAAAGGTGGCAGGAATTTCCAGGAGATCCC CAAGAATGCTGCCTTGTCTGTGGACAAAGATGGACCATGTGCCCTTCGGAATTAGGGATAGAAACAAATATTGTG TGCTCTTAACGATTAAGCTGTGTTATGGTGGGTTTTTCAGGTTTTTTACCTTTTTACCCCTTTACTCTGCAA TGTTGTAAAATTTCCAATGATGAGAGACAGCACAATAAATGTACCTTATCTCCTTAGGCTGAAGGCCATAACTAC ATAGTGGAGTAATTTAAGAACTCTCTTGCCTTCACCAACCCAAAAGGTTGCTTTTTGATAGCAACTGGCTAATGA ATTTTTAAAAAGAGAAGAAAAATACTAGTTTTCCCCTCTTTTGGGAAATAGAFTTTAAATGGCTAAACTACTAGC CTTAAAACTACTAGTCTAATAAAATCAACTACCACTTTTGTGAATCTGACAGGCCACATTTTTATATGGCCCTTT ACAGAATGGAGTGTTGAACAGGATACTAACGCCATTGAGTTGAGCTGGCCTAGCGATGGAGGGACACTCTAAC TTCTGGGAAACAAGCTTACATAGTCTTTTTAAAATGCACAAAGCCTCCCAGCTAAGAGGTCACTTGGTTTGGGC TTCATTAGGACTGAGACTTTGTTGAGTTCTTTCTGGGACTTGGAGAGTGGATGATATTCAGGCTCTGAACATTCC CAGCGCTCTCCCGAGGGTGCCACTTTCTCAAGATGAAAACTGTGACTGAAAAAAATTAATAATAAATGTTTCTGAG TGGCTCCAATTTTAGAGAACTTGAAAGCAAGGCTTTGGACAAAATTTTGAGACCCTAATCACTTTACCTTCCTCC ATAAACTCTTACTCAAATGATTTGAACTTT

MPHKVANRISDPNLPPRSESFSISGVQPARTPPMLRPVDPQIPHLVAVKSQGPALTASQSVHEQPTKGLSGFQEA LNVTSHRVEMPRQNSDPTSENPPLPTRIEKFDRSSWLRQEEDIPPKVPQRTTSISPALARKNSPGNGSALGPRLG SQPIRASNPDLRRTEPILESPLQRTSSGSSSSSSTPSSQPSSQGSQPGSQAGSSERTRVRANSKSEGSPVLPHE PAKVKPEESRDITRPSRPASYKKAIDEDLTALAKELRELRIEETNRPMKKVTDYSSSSEESESSEEEEEDGESET HDGTVAVSDIPRLIPTGAPGSNEQYNVGMVGTHGLETSHADSFSGSISREGTLMIRETSGEKKRSGHSDSNGFAG HINLPDLVQQSHSPAGTPTEGLGRVSTHSQEMDSGTEYGMGSSTKASFTPFVDPRVYQTSPTDEDEEDEESSAAA LFTSELLRQEQAKLNEARKISVVNVNPTNIRPHSDTPEIRKYKKRFNSEILCAALWGVNLLVGTENGLMLLDRSG QGKVYNLINRRRFQQMDVLEGLNVLVTISGKKNKLRVYYLSWLRNRILHNDPEVEKKQGWITVGDLEGCIHYKVV KYERIKFLVIALKNAVEIYAWAPKPYHKFMAFKSFADLQHKPLLVDLTVEEGQRLKVIFGSHTGFHVIDVDSGNS YDIYIPSHIQGNITPHAIVILPKTDGMEMLVCYEDEGVYVNTYGRITKDVVLQWGEMPTSVAYIHSNQIMGWGEK AIEIRSVETGHLDGVFMHKRAQRLKFLCERNDKVFFASVRSGGSSQVFFMTLNRNSMMNW

TATTTTGTCAGATGTGTTGAACCTCGATTAAGATTGCATTATGACATTCTTGAAGACCGAGTTCCATCAGGACTT ATTGTTGACTACCACAATCTGTTGTCTCAATGTGAGGAGGTTACAGGAAATTTTTAAATCTGAGAAGCAGTTTG TCAAATTGTAACTCTGATTCCGAGCAGGAAAATATCTCCATGGTGGAAGGGTTAAAATTGTATTCGGAGATGGAA CAGTTGAAACAAAAGCTGAAACTCATTGAGAATCCTTTGTTGAGGTATGTGTTTGGTTATCAGAAGAATTCTAAC ATCCAAGCAAAGGGTGTCCGTTCCAGCGGTCAGAAGATCACTCATGTGGTCTCCTCCACCATGATGGCTGGTCTC $\tt CTGCGGTCCCTGCTTACGGACAGGCTTTGCCAGGAGCCTGGTGAGGAAGAAGAGAAATTCAGTTCCATAGTGAT$ AAAGGCGACACTTTTGTGGACTGCACTGGTGCTGATATTAAAATCTCAGGCATAAAATTTGTTCAGCATGATGCT GTAGAGGGAATCTTAATTGTTCACCGTGGTAAGACTACGCTGGAAAACTGTGTGCTGCAGTGTGAGACCACCGGA GTCACAGTGCGGACATCAGCAGAGTTTCTAATGAAGAACTCGGATTTATATGGCGCCAAGGGTGCTGGTATAGAA TTCTTAGATGAACATTATGACATTCCCAAGATATCCATGGTGAATAATAATACATAATAATAATGAAGGTTATGGT GTTGTCTTGGTGAAACCTACAATCTTCTCTGACCTGCAAGAAAATGCTGAAGATGGAACTGAAGAAAATAAAGCG CTTAAAATTCAGACAAGTGGAGAGCCAGATGTGGCTGAAAGAGTGGATCTAGAAGAGCTGATTGAGTGTGCAACT GGTAAAATGGAGCTTTGTGCAAGAACTGACCCTTCTGAGCAAGTCGAGGGAAATTGTGAAATTGTAAATGAACTA ATTGCTGCCTCCACACAGAAAGGCCAGATAAAGAAGAAAAGGTTGAGTGAACTGGGGGATCACGCAAGCTGATGAC ${\tt AACTTAATGTCACAGGAGATGTTTGTTGGGATTGTGGGGAACCAGTTCAAGTGGAATGGGAAAGGTAGTTTTGGC}$ ACATTTCTTTTCTGACTACAGTGATGTAAGTAGATAGCAAAATACTGGATTTTGCACATGCTGCCCTAAGAATCA CTGCTGCCATTGTAGTTTGCTGTATTGTCTGTATTTTATATTTTGATTATTTTGGGCTTGAGTGAAAGGTAGATTTA TTTCCATTTGCAGGTGTTGCACATAAAACACTCCCTCTTTATAAGAAAAATCATAAATGCATATAAAATAGAAAA TATTTGGAGATTGCTTATCTGAAAGTCTTGCTTTCTTATACACATGGTTCTCTCATATTAAGCCTGGTAGTAACT CAATAGGTGTCATATGTACAGCATTCTTCTTAGAGTTGCCTTTTCATCCCAATTACAGTGAGTCTGATTTCCATC CTGTATTTGCATAATACTTGTCTTAAAATAAAAGCTTTTATGATTGGGAATTTATCTGCCTAATCAGACTTATTA TTGAGACGTCAATGGGACGCATTTTTCTGTTGAGCTATGCAGTCGTCAAAACAGCGATAGACAGCATAGGAGGTT TGAAGCAGAAATGAAATGTTTTTCAGAGCCAATGTTGTACATAGAGCATTTTCACTATTGCTGAATGGGAATG ATTAAAAACAAGGTATTTTTCGGGCCAGGCGGTGGCTCACGCTTGTAATCGCAGCACTTTGGGAGGCTGAGGCAG TTAAAAAAATTAGCTGAGTGTGGTGCATGCATGTAGTTCCAGCTACTCAGGAGGCTGAGGCTAGAGGATCC TTGAGCCCAGGAGGTTGAGGCTGCAGTGAGGTGTGATTGCGCCACTGCATTCCAGCTTGGGCGACAGAGCGAGAC CCAGTCTCAAAAAAAAAAAAAAGTATTTTCTCTTACCGTTACAGTATTCTGATTATTACTGACACAGTCAAA ATGATTAACTGTACAACCTGTATCTGCTGGGTGTTCTTGTTATCATATTGTAAAACAGCTTTAAAAATATTTATA TTTTAAAAACTGTATGTGACATTAATATGCCTAATGATTAAAATTATAGTGATGAAATAACAAAA

MAAMSLLRRVSVTAVAALSGRPLGTRLGFGGFLTRGFPKAAAPVRHSGDHGKRLFVIRPSRFYDRRFLKLLRFYI ALTGIPVAIFITLVNVFIGQAELAEIPEGYVPEHWEYYKHPISRWIARNFYDSPEKIYERTMAVLQIEAEKAELR VKELEVRKLMHVRGDGPWYYYETIDKELIDHSPKATPDN

GTTTTGCCAGTTATGCGAAAACATGGCTGCGGCCGGTTTGGCCCTTCTTTGTAGGAGAGTTTCATCCGCCCTGAA ACCAAATGTGACATCCTTTCACCAATATAGATTACTTCATACCACATTGTCAAGGAAAGGACTAGAAGAATTTTT TGATGACCCAAAAAACTGGGGGCAAGAAAAGTAAAATCTGGAGCAGCATGGACCTGTCAGCAACTAAGGAACAA GGCCAAGCGGCAGAGATTGCCAATGCCAAGTCCAGAGCGGTTAGATAAGGTAGATTCCATGGATGCATTAGA ATACAATAGGAAACGATTCTTTGCCTTGCCTTATGTGGACCATTTTCTCAGACTGGAACGTGAGAAACGAGCCCG CATCAAAGCACGGAAGGAAAATTTAGAGAGAAAGAAAGCAAAAATTCTTTTAAAAAAGTTTCCACATCTTGCTGA AGCCCAAAAGTCAAGTCTTGTCTAAGATGTCTGAACTATTAAATTTACCATTTTGTTTTTCTTGAATAGTCTGTG TACAGGAGTAAATATGTTAAGTGGTTTATAAAGAAATTCTGTTTTTAGTCAAGTGACTTTACTAATCAGTTGTTC TAAGTGTGAATATGGCATGCTAATTAGCTAATTTGGTAGAAGCTAATTTGCTTCTAAAAATCAGGTATAAAGTTC AGATGAGATTCCCACTTTATAAATTCTGACATTTAAGCAGGCTTTAAATGTCACCTGCTACCTTAGAGTGTGAAG GTGATGGTAACTGCCACAGCAAAGGCAATACCGTAGTTTTTGAATTTGAATAATAGTTTTACCTCTGTTGTTAAT ${\tt AGGCTATGAAGAGGATGTGGGTATTGCTGTTAATAAACGGAGGACTTTGATTCAAAATAATGAGAAATACATTTA}$ TAAGCCTAAGGTAAAAAGCATAGGCAGTAACTTTTACTAGTCAATAAAAAGCAGTTCTACCAATCCACTGGTAAT TAATACACTAAACAGAGTTGGAAAGCATTTTACTGAAAGCAAAATATTTAGAGAAAATAGACATTTATACAAAAT TATAAAATGCTTGTAATAAGAATAAGTGCATTTCAAGGAAAGCACAAACTTAATTTATAGAGCCAGTTAAAGCTT TAAAAAATTTAAGTGGAAATTGAAATATGCAAAAATGTATAAACATTCTACAAAAGATGGTCATTCTTTTCCTGA GACTGACTCCTAACATTGTGTTTCCTGATAACCCCTTTACATTGGAAGGGTCAAATAATCCTTCTGGAATCTTTA GCCGCTCTGCACCAAAATCACAATTGTAGCCATTGGGGAATTCATAATGAACAGTTGGCATCTGTGCAGCCACTT GTTCATCATAAGTTGAATCTGACACTTGAAGTACCGAAGCTTGAAAATCCTGGATAACACAATTACACATATAAT TGTGCCAAGACCTCGTAACCTGAGGCAACTTCTCTTTTCTTTTCCAGTTTGCTGGAGATCCTTCACGAACAGCTT CTTTTGATGCAATCATATATGGAGGAACCAATTCAATATTCATTTCTTGGAAGAGTTCTCTGCACTGCATAGTAA TAAAGTCTCCAGCAAGAGGGGATTTCACAATGCCTTGTTGAAGGACATAGCCATCGTGGACTGGAATTGCAGTGG TATGAGTGGCTCCACTGTCCAAAATCAGCCCAGTAGAACGACCATTAGCAAATGCTGTCAAAACTGCAGTTTTGC ${\tt ACGGTGCCTCTGACATGAGAACAGGATGGAGACTGGCTTCTGATTTGACATGCATTTTGTAGGTATGATCCAAAA}$ TAGCTTGGAAACTATCCCAGTCTTCAACCATCCCATTTTTTAGAGGTGAAATGGCCTCCATATTCTCCCTCGGAA CACGCAGAGCATTAGTATCTATGTAGTAGGTGGGACCGCCTTGTTTGCCTTTATCGCCATCTATTTCCATTAATG TGCTTCCGTCATCTCTTCTACCACCATACCAATAGCTGTAGGAAAATCCACCTTGGGGCAGTCCTCACCAGCAT TCATGGCTGCTGCCGGCGCGACTCCTACCCTAAGGGCTAACTGGCGAAGTGACTGCAGTGGCCGCGACTGCGAGT

 $\tt CCGCTTTGTTGCCTGAGGTGGGGGGGGGGAAGTTAAGGGAGTCAGGGGCTATCGCTCCTCGAGACTCGCAGTC$ GTACGGGGGAGATGAAGTTGGAGCCCTTGTTTTTGACATTGGATCCTATACTGTGAGAGCTGGTTATGCTGGTGA GGACTGCCCCAAGGTGGATTTTCCTACAGCTATTGGTATGGTGGTAGAAAGAGATGACGGAAGCACATTAATGGA AATAGATGGCGATAAAGGCAAACAAGGCGGTCCCACCTACTACATAGATACTAATGCTCTGCGTGTTCCGAGGGA GAATATGGAGGCCATTTCACCTCTAAAAAATGGGATGGTTGAAGACTGGGATAGTTTCCAAGCTATTTTGGATCA TACCTACAAAATGCATGTCAAATCAGAAGCCAGTCTCCATCCTGTTCTCATGTCAGAGGCACCGTGGAATACTAG AGCAAAGAGAGAAACTGACAGAGTTAATGTTTGAACACTACAACATCCCTGCCTTCTTCCTTTGCAAAACTGC AGTTTTGACAGCATTTGCTAATGGTCGTTCTACTGGGCTGATTTTTGGACAGTGGAGCCACTCATACCACTGCAAT TCCAGTCCACGATGGCTATGTCCTTCAACAAGGCATTGTGAAATCCCCTCTTGCTGGAGACTTTATTACTATGCA GTGCAGAGAACTCTTCCAAGAAATGAATATTGAATTGGTTCCTCCATATATGATTGCATCAAAAGAAGCTGTTCG TGAAGGATCTCCAGCAAACTGGAAAAGAAAAGAGAAGTTGCCTCAGGTTACGAGGTCTTGGCACAATTATATGTG TAATTGTGTTATCCAGGATTTTCAAGCTTCGGTACTTCAAGTGTCAGATTCAACTTATGATGAACAAGTGGCTGC ACAGATGCCAACTGTTCATTATGAATTCCCCAATGGCTACAATTGTGATTTTGGTGCAGAGCGGCTAAAGATTCC CACAAGTGTTGGGATGTGTGATATTGACATCAGACCAGGTCTCTATGGCAGTGTAATAGTGGCAGGAGGAAACAC ACTAATACAGAGTTTTACTGACAGGTTGAATAGAGAGCTGTCTCAGAAAACTCCTCCAAGTATGCGGTTGAAATT GATTGCAAATAATACAACAGTGGAACGGAGGTTTAGCTCATGGATTGGCGGCTCCATTCTAGCCTCTTTGGGTAC **A**GAAAGAGTTCCCAAGCTTCTACCTTCCTTTTGTCACCTTACGTTTCATAGCTTTAGTATACTCAGGAAAAGAAT GACCATCTTTTGTAGAATGTTTATACATTTTTGCATATTTCAATTTCCACTTAAATTTTTTAAAGCTTTAACTGG CTCTATAAATTAAGTTTGTGCTTTCCTTGAAATGCACTTATTCTTATTACAAGCATTTTATAAATTTTGTATAAAT TGGTAGAACTGCTTTTTATTGACTAGTAAAAGTTACTGCCTATGCTTTTTACCTTAGGCTTACAGAATTAAATAA AAATTAGCCATTCCAGAAATAT

MSGGVYGGDEVGALVFDIGSYTVRAGYAGEDCPKVDFPTAIGMVVERDDGSTLMEIDGDKGKQGGPTYYIDTNAL RVPRENMEAISPLKNGMVEDWDSFQAILDHTYKMHVKSEASLHPVLMSEAPWNTRAKREKLTELMFEHYNIPAFF LCKTAVLTAFANGRSTGLILDSGATHTTAIPVHDGYVLQQGIVKSPLAGDFITMQCRELFQEMNIELVPPYMIAS KEAVREGSPANWKRKEKLPQVTRSWHNYMCNCVIQDFQASVLQVSDSTYDEQVAAQMPTVHYEFPNGYNCDFGAE RLKIPEGLFDPSNVKGLSGNTMLGVSHVVTTSVGMCDIDIRPGLYGSVIVAGGNTLIQSFTDRLNRELSQKTPPS MRLKLIANNTTVERRFSSWIGGSILASLGTFQQMWISKQEYEEGGKQCVERKCP

1400/6881 FIGURE 1302A

AGAGTACGTGTTTACAGATAAAACTGGTACACTGACAGAAAATGAGATCCAGTTTCGGGAATGTTCAATTAATGG CATGAAATACCAAGAAATTAATGGTAGACTTGTACCCGAAGGACCAACACCAGACTCTTCAGAAGGAAACTTATC TTATCTTAGTAGTTTATCCCATCTTAACAACTTATCCCATCTTACAACCAGTTCCTCTTTCAGAACCAGTCCTGA CAATGTTCAAACTGACTGCACTGGTGATGGTCCCTGGCAATCCAACCTGGCACCATCGCAGTTGGAGTACTATGC ATCTTCACCAGATGAAAAGGCTCTAGTAGAAGCTGCTGCAAGGATTGGTATTGTGTTTATTGGCAATTCTGAAGA AACTATGGAGGTTAAAACTCTTGGAAAACTGGAACGGTACAAACTGCTTCATATTCTGGAATTTGATTCAGATCG TAGGAGAATGAGTGTAATTGTTCAGGCACCTTCAGGTGAGAAGTTATTATTTGCTAAAGGAGCTGAGTCATCAAT TCTCCCTAAATGTATAGGTGGAGAAATAGAAAAAACCAGAATTCATGTAGATGAATTTGCTTTGAAAAGGGCTAAG AACTCTGTGTATAGCATATAGAAAATTTACATCAAAAGAGTATGAGGAAATAGATAAACGCATATTTGAAGCCAG GACTGCCTTGCAGCAGCGGGAAGAGAAATTGGCAGCTGTTTTCCAGTTCATAGAGAAAGACCTGATATTACTTGG AGCCACAGCAGTAGAAGACAGACTACAAGATAAAGTTCGAGAAACTATTGAAGCATTGAGAATGGCTGGTATCAA AGTATGGGTACTTACTGGGGATAAACATGAAACAGCTGTTAGTGTGAGTTTATCATGTGGCCATTTTCATAGAAC CATGAACATCCTTGAACTTATAAACCAGAAATCAGACAGCGAGTGTGCTGAACAATTGAGGCAGCTTGCCAGAAG AATTACAGAGGATCATGTGATTCAGCATGGGCTGGTAGTGGATGGGACCAGCCTATCTCTTGCACTCAGGGAGCA TGAAAAACTATTTATGGAAGTTTGCAGAAATTGTTCAGCTGTATTATGCTGTCGTATGGCTCCACTGCAGAAAGC AAAAGTAATAAGACTAATAAAAATATCACCTGAGAAACCTATAACATTGGCTGTTGGTGATGGTGCTAATGACGT CTATGCAATAGCCAGATTTAAGTTCCTCTCCAAATTGCTTTTTTGTTCATGGTCATTTTTATTATATTAGAATAGC TACCCTTGTACAGTATTTTTTTTTATAAGAATGTGTGCTTTATCACACCCCAGTTTTTATATCAGTTCTACTGTTT GATATATAGTCTTTTGGAACAGCATGTAGACCCTCATGTGTTACAAAATAAGCCCACCCTTTATCGAGACATTAG TAAAAACCGCCTCTTAAGTATTAAAACATTTCTTTATTGGACCATCCTGGGCTTCAGTCATGCCTTTATTTTCTT TTTTGGATCCTATTTACTAATAGGGAAAGATACATCTCTGCTTGGAAATGGCCAGATGTTTGGAAACTGGACATT TGGCACTTTGGTCTTCACAGTCATGGTTATTACAGTCACAGTAAAGATGGCTCTGGAAACTCATTTTTGGACTTG GATCAACCATCTCGTTACCTGGGGATCTATTATATTTTATTTTTGTATTTTCCTTGTTTTATGGAGGGATTCTCTG GCCATTTTTGGGCTCCCAGAATATGTATTTTGTGTTTATTCAGCTCCTGTCAAGTGGTTCTGCTTGGTTTGCCAT AATCCTCATGGTTGTTACATGTCTATTTCTTGATATCATAAAGAAGGTCTTTGACCGACACCTCCACCCTACAAG TACTGAAAAGGCACAGCTTACTGAAACAAATGCAGGTATCAAGTGCTTGGACTCCATGTGCTGTTTCCCGGAAGG AGAAGCAGCGTGTGCATCTGTTGGAAGAATGCTGGAACGAGTTATAGGAAGATGTAGTCCAACCCACATCAGCAG ATCATGGAGTGCATCGGATCCTTTCTATACCAACGACAGGAGCATCTTGACTCTCCCACAATGGACTCATCTAC ATGGCCACACTAGCTCTGAAATTAATTTCCAAAATCTTTGTAGTAGTTCATACCCACTCAGAGTTATAATGGCAA ACAAACAGAAAGCATTAGTACAAGCCCCTCCCAACACCCTTAATTTGAATCTGAACATGTTAAAATTTGAGAATA AAGAGACATTTTTCATCTCTTTGTCTGGTTTGTCCCTTGTGCTTATGGGACTCCTAATGGCATTTCAGTCTGTTG CTGAGGCCATTATATTTTAATATAAATGTAGAAAAAAGAGAGAAATCTTAGTAAAGAGTATTTTTTAGTATTAGC TTGATTATTGACTCTTCTATTTAAATCTGCTTCTGTAAATTATGCTGAAAGTTTGCCTTGAGAACTCTATTTTTT TATTAGAGTTATATTTAAAGCTTTTCATGGGAAAAGTTAATGTGAATACTGAGGAATTTTGGTCCCTCAGTGACC TGTGTTGTTAATTCATTAATGCATTCTGAGTTCACAGAGCAAATTAGGAGAATCATTTCCAACCATTATTTACTG CAGTATGGGGAGTAAATTTATACCAATTCCTCTAACTGTACTGTAACACAGCCTGTAAAGTTAGCCATATAAATG CAAGGGTATATCATATATACAAATCAGGAATCAGGTCCGTTCACCGAACTTCAAATTGATGTTTACTAATATTTT TGTGACAGAGTATAAAGACCCTATAGTGGGTAAATTAGATACTATTAGCATATTATTAATTTAATGTCTTTATCA TTGGATCTTTTGCATGCTTTAATCTGGTTAACATATTTAAATTTGCTTTTTTCTCTTTTACCTGAAGGCTCTGTG TATAGTATTCATGACATCGTTGTACAGTTTAACTATATCAATAAAAAGTTTGGACAGTATTTAAATATTGCAAA TATGTTTAATTATACAAATCAGAATAGTATGGGTAATTAAATGAATACAAAAAGAAGAGCCTCTTTCTGCAGCCG ACTTAGACATGCTCTTCCCTTTCTATAAGCTAGATTTTAGAATAAAGGGTTTCAGTTAATAATCTTATTTTCAGG TTATGTCATCTAACTTATAGCAAACTACCACAATACAGTGAGTTCTGCCAGTGTCCCAGTACAAGGCATATTTCA GGTGTGGCTGTGGAATGTAAAAATGCTCAACTTGTATCAGGTAATGTTAGCAATAAATTAAATGCTAAGAATGAT

FIGURE 1302B

TAATCGGGTACATGTTACTGTAATTAACTCATTGCACTTCAAAACCTAACTTCCATCCTGAATTTATCAAGTAGT TCAGTATTGTCATTTGTTTTTGTTTTATTGAAAAGTAATGTTGTCTTAAGATTTAGAAGTGATTATTAGCTTGAG AACTATTACCCAGCTCTAAGCAAATAATGATTGTATACATATTAAGATAATGGTTAAATGCGGTTTTACCAAGTT GGCTTCTAGAATTGGACTGGCAGGGGAAAGAATGGTAGAGACAGAAATTAAGACTTTATCCTTGTTTGCTTGTAA ACTATTATTTTCTTGCTAATGTAACATTTGTCTGTTCCAGTGATGTAAGGATATTAAGTTATTAAGCTAAATATT AATTTTCAAAAATAGTCCTTCTTTAACTTAGATATTTCATAGCTGGATTTAGGAAGATCTGTTATTCTGGAAGTA CTAAAAAGAATAATACAACGTACAATGTCTGCATTCACTAATTCATGTTCCAGAAGAGGAAATAATGAAGATATA CTCAGTAGAGTACTAGGTGGGAGGATATGGAAATTTGCTCATAAAATCTCTTATAAAACGTGCATATAACAAAAT GACACCCAGTAGGCCTGCATTACATTTACATGACCGTGTTTATTTGCCATCAAATAAACTGAGTACTGACACCAG ACAAAGACTCCAAAGTCATAAAATAGCCTATGACCAACTGCAGCAAGACAGGAGGTCAGCTCGCCTATAATGGTG AAGTAAATGGCAACCACTAGTGTGCTCATCCTGAACTGTTACTCCAAATCCACTCCGTTTTTAAAGCAAAATTAT CTTGTGATTTTAAGAAAAGAGTTTTCTATTTATTTAAGAAAGTAACAATGCAGTCTGCAAGCTTTCAGTAGTTTT CTAGTGCTATATTCATCCTGTAAAACTCTTACTACGTAACCAGTAATCACAAGGAAAGTGTCCCCTTTGCATATT TCTTTAAAATTCTTTCTTTGGAAAGTATGATGTTGATAATTAACTTACCCTTATCTGCCAAAACCAGAGCAAAAT GCTAAATACGTTATTGCTAATCAGTGGTCTCAAATCGATTTGCCTCCCTTTGCCTCGTCTGAGGGCTGTAAGCCT GAAGATAGTGGCAAGCACCAAGTCAGTTTCCAAAATTGCCCCTCAGCTGCTTTAAGTGACTCAGCACCCTGCCTC AGCTTCAGCAGGCGTAGGCTCACCCTGGGCGGAGCAAAGTATGGGCCAGGGAGAACTACAGCTACGAAGACCTGC ATACACAAAGGCTTCCAGACCTGAGCCACACCCAGGCCCTATCCTGAACAGGAGACTAAACAGAGGCAAATCAAC CCTAGGAAATACTTGCATTCTGCCCTACGGTTAGTACCAGGACTGAGGTCATTTCTACTGGAAAAGATTGTGAGA TTGAACTTATCTGATCGCTTGAGACTCCTAATAGGCAGGAGTCAAGGCCACTAGAAAATTGACAGTTAAGAGCCA AAAGTTTTTAAAATATGCTACTCTGAAAAATCTCGTGAAGGCTGTAGGAAAAGGGAGAATCTTCCATGTTGGTGT TTTTCCTGTAAAGATCAGTTTGGGGTATGATATAAGCAGGTATTAATAAAAATAACACCCAAAGAGTTACGTAA AACATGTTTTATTAATTTTGGTCCCCACGTACAGACATTTTATTTCTATTTTGAAATGAGTTATCTATTTCATA AAAGTAAAACACTATTAAAGTGCTGTTTTATGTGAAATAACTTGAATGTTGTTCCTATAAAAAATAGATCATAAC TCATGATATGTTTGTAATCATGGTAATTTAGATTTTTATGAGGAATGAGTATCTGGAAATATTGTAGCAATACTT GGTTTAAAATTTTGGACCTGAGACACTGTGGCTGTCTAATGTAATCCTTTAAAAATTCTCTGCATTGTCAGTAAA TGTAGTATATTATTGTACAGCTACTCATAATTTTTTAAAGTTTATGAAGTTATATTTATCAAATAAAAACTTTCC TATAT

MQFRECSINGMKYQEINGRLVPEGPTPDSSEGNLSYLSSLSHLNNLSHLTTSSSFRTSPENETELIKEHDLFFKA VSLCHTVQISNVQTDCTGDGPWQSNLAPSQLEYYASSPDEKALVEAAARIGIVFIGNSEETMEVKTLGKLERYKL LHILEFDSDRRMSVIVQAPSGEKLLFAKGAESSILPKCIGGEIEKTRIHVDEFALKGLRTLCIAYRKFTSKEYE EIDKRIFEARTALQQREEKLAAVFQFIEKDLILLGATAVEDRLQDKVRETIEALRMAGIKVWVLTGDKHETAVSV SLSCGHFHRTMNILELINQKSDSECAEQLRQLARRITEDHVIQHGLVVDGTSLSLALREHEKLFMEVCRNCSAVL CCRMAPLQKAKVIRLIKISPEKPITLAVGDGANDVSMIQEAHVGIGIMGKEGRQAARNSDYAIARFKFLSKLLFV HGHFYYIRIATLVQYFFYKNVCFITPQFLYQFYCLFSQQTLYDSVYLTLYNICFTSLPILIYSLLEQHVDPHVLQ NKPTLYRDISKNRLLSIKTFLYWTILGFSHAFIFFFGSYLLIGKDTSLLGNGQMFGNWTFGTLVFTVMVITVTVK MALETHFWTWINHLVTWGSIIFYFVFSLFYGGILWPFLGSQNMYFVFIQLLSSGSAWFAIILMVVTCLFLDIIKK VFDRHLHPTSTEKAQLTETNAGIKCLDSMCCFPEGEAACASVGRMLERVIGRCSPTHISRSWSASDPFYTNDRSILTLSTMDSSTC

TTTAGCAGTCTGTGATGATCAGCAAAAAAGCACATAAAGTAAAAATTAGTTGACCATGCTAAATTCAATTCTGGA ATTTTTTTTTTTTTGGGCATTTCTAGAACTTTTTACATTTGAAAGTACATGATGAGTATTAGTAACGATGACTTA TGTATAATCAGAATCTTATGACAATTTAGTTTTACAAGGTCAGAAGAGATGAGTTTGCTAAACCCAGCTGTGAT TCATTTTCTGTTTTTCCTCTATGTGAGTCAGCTACAAAAGTGGTCTAATTTTTACAACAGTAGAACTTCCTCCTT TTCTACTGTAATCTTCCCACTGACTTTACTGCACAGGTATGAAATACTAGTGTATTGGATCTTCAGTAACCTTTT TATTTCCTAGATGATTGAAATATAGGTATTTACTCCATTTAAACCAGGTGATAAGATGATGTAAATACTCAGGGA GGGTATTAACTTGTTACTTTTGCTCGTTTGGGGTGTAAAGTGCCATGACTGAATAATCTTCAATTCATGATTCTA GAGTAAGTTTAATTTGGAAAAAGGGGCTTCACACATGGTGGTGGTTGAACATTGATTCTTTTATACTTAAAAAGA ${\tt TGAAAATGTTTTGTGGACTGATACATTTTATCTTACTGAATATGAATTGTTT{\color{red} {\bf ATG}}{\tt TATCTCTACTGTCAAATAGC}$ TTGTGTGTGCCTTTTATGTCTTGAGATTTATATGTGGAAAAGACGACATCTACTTCAAACTGTATTTTTTCGTT TTTTTTTTTTTTTGGGGAAGGGGGGAGAACGGGGTCTTGCTCTGTCGCCCAGGCTGGAGTGCAGTGGCGCGATCT $\texttt{CAGC} \underline{\textbf{TGA}} \texttt{CTGCAACCTCCAGGGTTCAAGGGATTCTGCCTCAGCCTCCCGAGTAGCTGAGACCACAGGTG}$ CGTGCCACCACCCCGGCTAATTTTTTTGTATTTTTAGTAGAGACGGGTTTAGTAGAGACGGATCACTCCTGAC ${\tt CACGTGATCCGCCCACCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCCCCGGCCTGTATTTT}$ CAGAGAGGAGACTTGGTGTTTTTTGTGGTGCCAAGTGGTAAGATAATGTCTCTTTGAGGCTTCCTATGGACTGCC TTTATTTTAGTAAACTCAAGACACCAGTTAACCTCAACAGAGTTTTGGCCTTATTAGAATTTGTTGTGCATCTTA GCACCAGAAACCATTTGAGCCAGGAGTGTGAATGAATAATTCCAGAGACACTTTAGACATTTTTTAATGTTTTAT ATGAACATTTTACATTTGTGTGATTGCCTTAGATATTAAATTTTCCTAGTGCTGATAAAAACAGCAACATTCATA ACTTATTTTATATATTGTTCCAAAGAAAAGAATTTGTTTTAATGGTTTCAAAATAACTGCACCTGAATTTGTTTA TGTGCCTTAAGTTCTCTAGTGCTATTTCAACTTTTTTTCAATCTAAATGAAGCTTACCTTAGATAAGGTTCATA TTTGTTTCCTATAGAGTAAATAAACTTCCCCTTCTTAAATTGTGTAATAAGCACCAACGTGTGGTTGCTTGGCAG GTGCTTTTTAAAATATTCAGACAAATATCTATCTTACATTGATTAAACCCGTGTAAATTCATTTGCAGTATCTAC ATCGAATGTCAAAAAAGTATACTTATTTTTGTTCCATACTTATGTACAATTTTTTCCCTCTTCAGGCTTTTTCAT TTGAGAGTTGTTGGAGCTCTAAGACAATACAAATTTAGAGTTGAACAAAAGTATAATCTGCTTTACAACTAGTAT AGACCTAAGGTCATTTGCTTTCAATTAGAGGCTCCAGAGTCTTCATAGTGGAAAGAATGCTTTGTATTTAATTGT TCTTAGTTAAGTTGTAGCACGTGAATACTTACTTACATGTTTTGTTTAAATATACTTCTTGCATAGTTTAATTTT TTAAAAGTTGTATCTAATAAAATGTCTTTTAACCATTATTACTTGACTATATGGTTGTATTAAATTTTGTTTACG

 ${\tt MYLYCQIAFLKLRKDKGSITPLLSISKPGIFFFSCCLDMAIDFLNCCENPYMKREELNCVCLLCLEIYMWKRRHLLQIVFFSFFFFGEGGRTGSCSVAQAGVQWRDLS}$

GTCTGGAATCAAGCGAACCATCAAAGAAACCGACCCTGATTACGAGGATGTATCTGTGGCCCTTCCAAATAAGCG GCATAAAGCAATTGAGAATTCAGCTCGAGATGCTGCTGTGCAGAAGATTGAGACTATTATCAAAGAACAGTTTGC TAAACTGCGTGCCTGCATTGTAGCAAACTACTATGCTTCTGCAGGTCTTCTAAAAGTTTCTGAGGGATCAAAGAC ATGTGATACGATGGTTTTTAATCATCCTGCTATCAAGAAATTTTTGGAATCACCATCTAGGTCATCATCTCCTGC CAATCAGAGAGCAGAAACACCATCAGCCAATCATTCAGAAAGTGATTCTTTATCTCAGCACAATGACTTCTTATC TGACAAAGATAATAACAGCAATATGGATATAGAGGAAAGACTCTCAAACAACATGGAGCAGAGACCAAGCCGAAA TACTGGAAGGGATACTTCTAGAATTACTGGCTCCCATAAAACAGAACAGCGGAATGCTGATCTCACAGATGAGAC TTCACGACTTTTTGTAAAGAAAACAATAGTAGTGGGCAATGTGTCCAAGTATATACCTCCGGATAAGAGGGAAGA AAATGACCAGTCAACTCATAAGTGGATGGTATATGTCCGAGGGTCCCGTAGAGAACCCAGCATTAATCATTTTGT CAAGAAGGTTTGGTTCTTCCTTCATCCTAGCTATAAACCAAATGACCTTGTGGAAGTTAGAGAGCCTCCTTTTCA CAGCGTAAACACATCTGGAGGGGTGCAGACGATCCTGATGCCTGTGAATAAAGTGGTTCAGTCATTTTCTACCAG CAAGCCACCTGCCATTCTGCCTGTAGCTGCCCCAACTCCAGTTGTCCCCAGCTCTGCTCCAGCAGCTGTTGCAAA AGTGAAGACTGAACCAGAAACACCTGGACCGAGTTGCCTCTCTCAGGAGGGTCAGACAGCAGTGAAAACAGAAGA $\texttt{AAGTTCTGAGCTGGGAAACTATGTCATTAAGATAGACCATTTAGAAACTATCCAGCAACTCCTAACT\\ \textbf{TAG}\\ \texttt{TAAAG}\\$ AAGATTCCATTAATCACTGCAAAAAGTGAAGATGCCAGCTGCTTTTCTGCAAAGTCTGTGGAGCAGTACTATGGC TGGAACATTGGAAAAAGGAGAGCCGCTGAGTGGCAAAGAGCAATGACAATGCGAAAAGTCTTACAAGAAATCCTG GAGAAGAATCCGAGATTTCACCACCTGACTCCCCTCAAAACCAAGCACATCGCTCACTGGTGCCGCTGTCATGGC TACACCCCACCGGACCCTGAGAGCCTGAGGAATGACGGGGACTCCATCGAGGACGTGCTGACCCAGATCGACAGC GAGCCCGAGTGCCCATCATCATCTCCTCTGCTGACAACCTCTGCCGCAAACTGGAGGACCTGCAACAGTTCCAG AATCTATTCTCAGCAGGGCATAGGGCACGCACTGGCTTAACAGTTTAGTATATAAGGCTCAAATAGTCTATACCT GAACTGCTATAAGCAAGGTCGATAGGGAAGTGGATAGATTGCTTCAGCAAAGTGAACTGTGAGATCTCCAGGACA GAGGGAGAAGATCTGATCCAAATGAGAACAGATTGGTTATTGCAGGTATCACAGCCTAAAGAAATTATCTTTTT GCAAAAGAAATATTAAATGATTTAGCAGTCTCCACGTGTGTTAATGTTTCAAACGTGTATCATAATGTGTATAAT TGTGTAACAAAATTGTCTACAATAAATCTTTTGGTATTTGT

MKNKEHEIEVIDQRLIEARRMMDKLRACIVANYYASAGLLKVSEGSKTCDTMVFNHPAIKKFLESPSRSSSPANQ RAETPSANHSESDSLSQHNDFLSDKDNNSNMDIEERLSNNMEQRPSRNTGRDTSRITGSHKTEQRNADLTDETSR LFVKKTIVVGNVSKYIPPDKREENDQSTHKWMVYVRGSRREPSINHFVKKVWFFLHPSYKPNDLVEVREPPFHLT RRGWGEFPVRVQVHFKDSQLKPLSVNTSGGVQTILMPVNKVVQSFSTSKPPAILPVAAPTPVVPSSAPAAVAKVK TEPETPGPSCLSQEGQTAVKTEESSELGNYVIKIDHLETIQQLLT

MSRALDVLQMKEEDVLKFLAAGTHLGGTNLDFQMDNTGQRAVLKFAAATGATQIVGRFTPGTFTSQTQAAFREPR LLVVTDPRADHQPLTETSYVNLPTIALCHTDFPLRYVDIAITCNNKGAPSVGPSWWMLALEVLRVCGTISLEHPW EVMPDLYFYRDPEEIGKEEQVAAEKTVTKEEFQGKWTAPAPEFTAIQPEVGDWSDGVQVPSVPIHQVPTEDWSAQ PATEDWSAAPTAQATEWVETTTEWS

TGCGTGCGGTGGCAGCTTCCTTGCGGAAGTGGTGACCGTGAGAGAAGAAGATGGCGGCCCCTGTAGTGGCGCCGC CTGGTGTGGTGGTTAGTCGGGCTAACAAGCGCAGCGGCGCGGGGGCCGGGAGGCAGCGGTGGCGGGGAGCCAGAG GGGCGGAGGAGCACCGCCGCCCCTACAAGCAGTTCTGGTGGCCGATAGCTTCGATCGCCGCTTCTTCCCCA TCTCCAAGGACCAGCCTCGGGTCCTCTTGCCCCTGGCCAATGTGGCATTAATTGACTACACTCTGGAATTCCTGA CTGCCACAGGTGTACAGGAAACATTTGTCTTTTGTTGCTGGAAAGCTGCTCAAATCAAAGAACATTTACTGAAGT CAAAGTGGTGCCGCCCTACATCTCTCAATGTGGTTCGAATAATTACATCAGAGCTCTATCGATCACTGGGAGATG TCCTCCGTGATGTTGATGCCAAGGCTTTGGTGCGCTCTGACTTTCTTCTGGTGTATGGGGATGTCATCTCAAACA TCAATATCACCAGAGCCCTTGAGGAACACAGGTTGAGACGGAAGCTAGAAAAAAATGTTTCTGTGATGACGATGA TCTTCAAGGAGTCATCCCCAGCCACCCAACTCGTTGCCACGAAGACAATGTGGTAGTGGCTGTGGATAGTACCA CAAACAGGGTTCTCCATTTTCAGAAGACCCAGGGTCTCCGGCGTTTTGCATTTCCTCTGAGCCTGTTTCAGGGCA GTAGTGATGGAGTGGAGGTTCGATATGATTTACTGGATTGTCATATCAGCATCTGTTCTCCTCAGGTGGCACAAC TCTTTACAGACAACTTTGACTACCAAACTCGAGATGACTTTGTGCGAGGTCTCTTAGTGAATGAGGAGATCCTAG GGAACCAGATCCACATGCACGTAACAGCTAAGGAATATGGTGCCCGTGTCTCCAACCTACACATGTACTCAGCTG TCTGTGCTGACGTCATCCGCCGATGGGTCTACCCTCTCACCCCAGAGGCGAACTTCACTGACAGCACCACCAGA GCTGCACTCATTCCCGGCACAACATCTACCGAGGGCCTGAGGTCAGCCTGGGCCATGGCAGCATCCTAGAGGAAA ATGTGCTCCTGGGCTCTGGCACTGTCATTGGCAGCAATTGCTTTATCACCAACAGTGTCATTGGCCCCGGCTGCC ACATTGGTGATAACGTGGTGCTGGACCAGACCTACCTGTGGCAGGGTGTTCGAGTGGCGGCTGGAGCACAGATCC ATCAGTCTCTGCTTTGTGACAATGCTGAGGTCAAGGAACGAGTGACACTGAAACCACGCTCTGTCCTCACTTCCC AGGTGGTCGTGGGCCCAAATATCACGCTGCCTGAGGGCTCGGTGATCTCTTTGCACCCTCCAGATGCAGAGGAAG ATGAAGATGATGGCGAGTTCAGTGATGATTCTGGGGCTGACCAAGAAAAGGACAAAGTGAAGATGAAAGGTTACA ATCCAGCAGAAGTAGGAGCTGCTGGCAAGGGCTACCTCTGGAAAGCTGCAGGCATGAACATGGAGGAAGAGGAGG AACTGCAGCAGAATCTGTGGGGACTCAAGATCAACATGGAAGAAGAGAGTGAAAGTGAAAGTGAGCAAAGTATGG GAACACTACAGCGGGGCAAAGAGGAGAACATTTCTTGTGACAATCTCGTCCTGGAAATCAACTCTCTCAAGTATG CCTATAACGTAAGTCTAAAGGAGGTGATGCAGGTACTGAGCCACGTGGTCCTGGAGTTCCCCCTGCAACAGATGG ATTCCCCGCTTGACTCAAGCCGCTACTGTGCCCTGCTGCTTCCTCTGCTAAAGGCCTGGAGCCCTGTTTTTAGGA ACTACATAAAGCGCGCAGCCGACCATTTGGAAGCGTTAGCAGCCATTGAGGACTTCTTCCTAGAGCATGAAGCTC TTGGTATTTCCATGGCCAAGGTACTGATGGCTTTCTACCAGCTGGAGATCCTGGCTGAGGAAACAATTCTGAGCT GGTTCAGCCAAAGAGATACAACTGACAAGGGCCAGCAGTTGCGCAAGAATCAACAGCTGCAGAGGTTCATCCAGT TGCCCTCCTGGCTCCTGGGCTGGGACAAGTGAGGAACTAGCTGCAGAGGGATGAGTGACCACCATCCAGGCTGAG ACTGAAAGGAGCAGAGCTGGAACTACAGTATTCTTTCCCCTGCTAGCAACCATGTGCCTCCCATCCTGACTGTG GAGTTGGGATGTGGAAGTGGGGCTGGAACAAAGCTTCTGCCTAGGGAGGAGCTAAGCAGGCCCGGCAGTTGGAGG AAGGCCAGAGGAACAGCTTTGTGCTCCGGCTTTCCCTCAGGGAACAGCAGAGAGCAGTTGGCTCTTTCTGCTGCT TGTATATGTTAATATTAAAAGAGAGTGGTGT

MAAPVVAPPGVVVSRANKRSGAGPGGSGGGGARGAEEEPPPPLQAVLVADSFDRRFFPISKDQPRVLLPLANVAL
IDYTLEFLTATGVQETFVFCCWKAAQIKEHLLKSKWCRPTSLNVVRIITSELYRSLGDVLRDVDAKALVRSDFLL
VYGDVISNINITRALEEHRLRRKLEKNVSVMTMIFKESSPSHPTRCHEDNVVVAVDSTTNRVLHFQKTQGLRRFA
FPLSLFQGSSDGVEVRYDLLDCHISICSPQVAQLFTDNFDYQTRDDFVRGLLVNEEILGNQIHMHVTAKEYGARV
SNLHMYSAVCADVIRRWVYPLTPEANFTDSTTQSCTHSRHNIYRGPEVSLGHGSILEENVLLGSGTVIGSNCFIT
NSVIGPGCHIGDNVVLDQTYLWQGVRVAAGAQIHQSLLCDNAEVKERVTLKPRSVLTSQVVVGPNITLPEGSVIS
LHPPDAEEDEDDGEFSDDSGADQEKDKVKMKGYNPAEVGAAGKGYLWKAAGMNMEEEEELQQNLWGLKINMEEES
ESESEQSMDSEEPDSRGGSPQMDDIKVFQNEVLGTLQRGKEENISCDNLVLEINSLKYAYNVSLKEVMQVLSHVV
LEFPLQQMDSPLDSSRYCALLLPLLKAWSPVFRNYIKRAADHLEALAAIEDFFLEHEALGISMAKVLMAFYQLEI
LAEETILSWFSQRDTTDKGQQLRKNQQLQRFIQWLKEAEEESSEDD

PCT/US2003/028547

1411/6881 FIGURE 1312

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FIGURE 1313A

GCAGCCTCCCGAGTGCAGAGTGCAGCCCCTGCCCGCCCTGGCCCAGCTGCCCATGTCTACCCTGCTGGATCCCAA GTAATGATGATCCCTTCCCAGATCTCCTACCCAGCCTCCCAGGGGGCCTACTACATCCCTGGACAGGGGCGTTCC ACATACGTTGTCCCGACACAGCAGTACCCTGTGCAGCCAGGAGCCCCAGGCTTCTATCCAGGTGCAAGCCCTACA CCAGTTTTGATGAACCAGCCACCCCAGATTGCTCCCAAGAGGGAGCGTAAGACGATCCGAATTCGAGATCCAAAC GGAGGCGGTCTGGAGCCTCAAGCTAATGGGGAGACGCCCCAGGTTGCTGTCATTGTCCGGCCAGATGACCGGTCA CAGGGAGCAATCATTGCTGACCGGCCAGGGCTGCCTGGCCCAGAGCATAGCCCTTCAGAATCCCAGCCTTCGTCG GGGGACACTATGACAACTATACAAATGTCTGTAGAAGAATCAACCCCCATCTCCCGTGAAACTGGGGAGCCATAT CGCCTCTCTCCAGAACCCACTCCTCTCGCCGAACCCATACTGGAAGTAGAAGTGACACTTAGCAAACCGGTTCCA GAATCTGAGTTTTCTTCCAGTCCTCTCCAGGCTCCCACCCCTTTGGCATCTCACACAGTGGAAATTCATGAGCCT AATGGCATGGTCCCATCTGAAGATCTGGAACCAGAGGTGGAGTCAAGCCCAGAGCTTGCTCCTCCCCCAGCTTGC CCCTCCGAATCCCCTGTGCCCATTGCTCCAACTGCCCAACCTGAGGAACTGCTCAACGGAGCCCCCTCGCCACCA GCTGTGGACTTAAGCCCAGTCAGTGAGCCAGAGGAGGAGGCAGGAGGAGGTGACAGCATCAATGGCGCCCCCCACC ATCCCCTCTGCTACTCCAGCTACGGCTCCTTCAGCTACTTCCCCAGCTCAGGAGGAGGAAATGGAAGAAGAAGAA GAAGAGGAAGAAGGAGAAGCAGGAGAAGCAGGAGAAGCTGAGAGTGAGAAAGGAGGAGAAACTGCCCCCCA GAGAGTACCCCTATTCCAGCCAACTTGTCTCAGAATTTGGAGGCAGCAGCAGCCACTCAAGTGGCAGTATCTGTG CCAAAGAGGAGACGGAAAATTAAGGAGCTAAATAAGAAGGAGGCTGTTGGAGACCTTCTGGATGCCTTCAAGGAG GGTGTGCCCCCACGTCCTGAGGAAGCAGATGAGACCTGGGACTCAAAGGAAGACAAAATTCACAATGCTGAGAAC ATCCAGCCCGGGGAACAGAAGTATGAATATAAGTCAGATCAGTGGAAGCCTCTAAACCTAGAGGAGAAAAAAACGT TACGACCGTGAGTTCCTGCTTGGTTTTCAGTTCATCTTTGCCAGTATGCAGAAGCCAGAGGGATTGCCACATATC AGTGACGTGGTGCTGGACAAGGCCAATAAAACACCACTGCGGCCACTGGATCCCACTAGACTACAAGGCATAAAT TGTGGCCCAGACTTCACTCCATCCTTTGCCAACCTTGGCCGGACAACCCTTAGCACCCGTGGGCCCCCAAGGGGT GGGCCAGGTGGGGAGCTGCCCCGTGGGCCGGCTGGCCTGGGACCCCGGCGCTCTCAGCAGGGACCCCGAAAAGAA CCACGCAAGATCATTGCCACAGTGTTAATGACCGAAGATATAAAACTGAACAAAGCAGAGAAAGCCTGGAAACCC AGCAGCAAGCGGACGGCCGGCTGATAAGGATCGAGGGGAAGAAGATGCTGATGGCAGCAAAAACCCAGGACCTATTC CGCAGGGTGCGCTCCATCCTGAATAAACTGACACCCCAGATGTTCCAGCAGCTGATGAAGCAAGTGACGCAGCTG GCCATCGACACCGAGGAACGCCTCAAAGGGGTCATTGACCTCATTTTTGAGAAGGCCATTTCAGAGCCCAACTTC TCTGTGGCCTATGCCAACATGTGCCGCTGCCTCATGGCGCTGAAAGTGCCCACTACGGAAAAGCCAACAGTGACT GTGAACTTCCGAAAGCTGTTGTTGAATCGATGTCAGAAGGAGTTTGAGAAAGACAAAGATGATGATGAGGGTTTTT GCTCGGGACATAGCCCGGCGGCGCTCTTTAGGGAATATCAAGTTTATTGGAGAGTTGTTCAAACTGAAGATGTTA ACAGAGGCAATAATGCATGACTGTGTGGTCAAACTGCTTAAGAACCATGATGAAGAGTCCCTTGAGTGCCTTTGT CGTCTGCTCACCACCATTGGCAAAGACCTGGACTTTGAAAAAGCCAAGCCCCGAATGGATCAGTATTTCAACCAG ATGGAAAAATCATTAAAGAAAAGAAGACGTCATCCCGCATCCGCTTTATGCTGCAGGACGTGCTGGATCTGCGA GGGAGCAATTGGGTGCCACGCCGAGGGGATCAGGGTCCCAAGACCATTGACCAGATCCATAAGGAGGCTGAGATG GAAGAACATCGAGAGCACATCAAAGTGCAGCAGCTCATGGCCAAGGGCAGTGACAAGCGTCGGGGCGGTCCTCCA GGCCCTCCCATCAGCCGTGGACTTCCCCTTGTGGATGATGGTGGCTGGAACACAGTTCCCATCAGCAAAGGTAGC CGCCCCATTGACACCTCACGACTCACCAAGATCACCAAGCCTGGCTCCATCGATTCTAACAACCAGCTCTTTGCA CCTGGAGGGCGACTGAGCTGGGGCAAGGGCAGCGGAGCCTCAGGAGCCCTCAGACGCATCAGAA GCTGCTCGCCCAGCTACTAGTACTTTGAATCGCTTCTCAGCCCTTCAACAAGCGGTACCCACAGAAAGCACAGAT AATAGACGTGTGGTGCAGAGGAGTAGCTTGAGCCGAGAACGAGGCGAGAAAGCTGGAGACCGAGAGACCGCCTA GAGCGGAGTGAACGGGGAGGGGACCGTGGGGACCGGCTTGATCGTGCGCGGACACCTGCTACCAAGCGGAGCTTC AGCAAGGAAGTGGAGGAGCGGAGTAGAGAACGGCCCTCCCAGCCTGAGGGGCCTGCGCAAGGCAGCCTAGCCTCACG GAGGATCGGGACCGTGGGCGGGATGCCGTGAAGCGAGAAGCTGCCCTACCCCCAGTGAGGCCCCTGAAGGCGGCT

1413/6881 FIGURE 1313B

CTCTCTGAGGAGGAGTTAGAGAAGAAATCCAAGGCTATCATTGAGGAATATCTCCATCTCAATGACATGAAAGTA GGCAGTCCAGTGCGTGCAGGAGCTGGCCTCACCCTCCTTGCTCTTCATCTTTGTACGGCATGGTGTCGAGTCTAC GCTGGAGCGCAGTGCCATTGCTCGTGAGCATATGGGGCAGCTGCTGCACCAGCTGCTCTGTGCTGGGCATCTGTC TACTGCTCAGTACTACCAAGGGTTGTATGAAATCTTGGAATTGGCTGAGGACATGGAAATTGACATCCCCCACGT GTGGCTCTACCTAGCGGAACTGGTAACACCCATTCTGCAGGAAGGTGGGGTGCCCATGGGGGAGCTGTTCAGGGA GATTACAAAGCCTCTGAGACCGTTGGGCAAAGCTGCTTCCCTGTTGCTGGAGATCCTGGGCCTCCTGTGCAAAAG GGACATTGGTGCATTCGTCGCTGAACAGAAGGTGGAGTATACCCTGGGAGAGGAGTCGGAAGCCCCTGGCCAGAG GGCACTCCCCTCCGAGGAGCTGAACAGGCAGCTGGAGAAGCTGCTGAAGGAGGGCAGCAGTAACCAGCGGGTGTT CGACTGGATAGAGGCCAACCTGAGTGAGCAGCAGATAGTATCCAACACGTTAGTTCGAGCCCTCATGACGGCTGT GCAGAAATACCTGTGTGACGAGCAGAAGGAGCTACAGGCGCTCTACGCCCTCCAGGCCCTTGTAGTGACCTTAGA ACAGCCTCCCAACCTGCTGCGGATGTTCTTTGACGCACTGTATGACGAGGACGTGGTGAAGGAGGATGCCTTCTA CAGTTGGGAGAGTAGCAAGGACCCCGCTGAGCAGCAGGGCAAGGGTGTGGCCCTTAAATCTGTCACAGCCTTCTT CAAGTGGCTCCGTGAAGCAGAGGAGGAGTCTGACCACAACTGAGGGCTGGTGGGGCCCGGGGACCTGGAGCCCCAT GCACGGTGCCTGTAATTATTAAACAT

1414/6881 FIGURE 1314A

GGCGGCGCGCTGGGACCCGGTAGCGGCCGGAGAACAAGGGAGCTGGCGCCGCCAGCAGCCGCCGAGCTGGGTT CCGCCGGGCCCGAGGCCAGAGCCATGGGCGAGACCAAGATCATCTACCACTTGGATGGGCAGGAGACGCCGTACC TTGTGAAGCTGCCCTGCCCGCCGAGCGCTCACCTTGGCGGACTTTAAGGGCGTTTTGCAGCGACCCAGCTATA AGTTCTTCTTCAAGTCTATGGACGACGATTTCGGAGTGGTGAAGGAGGAGATCTCGGATGACAATGCCAAGCTAC CATGCTTCAATGGCCGGGTGTTCCTGGCTGGTGTCAGCTGAGGGCTCACACCCAGACCCAGCCCCTTCTGTG CTGATAACCCATCGGAGCTGCCACCACCTATGGAGCGCACGGGAGGCATCGGGGGACTCCCGACCCCCATCCTTCC ACCCTCATGCTGGTGGGGCAGCCAGGAGAACCTGGACAATGACACAGAGACGGACTCTTTGGTGTCTGCCCAGC GAGAGCGCCACGCCGGAGGGATGGCCCAGAGCATGCAACCCGGCTAAATGGAACTGCGAAGGGGGAACGGCGGC GAGAACCAGGGGGTTATGATAGCTCATCCACCCTTATGAGCAGTGAGCTGGAGACCACCAGCTTCTTTGACTCAG ATGAGGATGACTCCACCAGCAGGTTCAGCAGCTCCACAGAACAGAGCAGTGCCTCACGCCTGATGAGAAGACACA AGCGGCGGCGGCAGCAGCATTCTCGGATTGAGCGGTCCTCGTCCTTCAGCAGCATCACGGACTCCACCA TGTCACTCAACATCACGGTCACTCTCAACATGGAAAAATATAACTTCTTGGGCATCTCCATTGTGGGCCAAA GCAACGAGCGTGGTGACGGCGCATCTACATTGGCTCTATCATGAAGGGTGGGGCCGTGGCTGCTGATGGACGCA TCGAGCCAGGAGATATGTTGTTACAGGTAAACGAGATCAACTTTGAGAACATGAGTAATGACGATGCAGTCCGGG TACTGCGGGAGATTGTGCACAAACCGGGGCCCATCACCCTGACTGTAGCCAAGTGCTGGGACCCAAGTCCACGTG GTTGCTTCACATTGCCCAGGAGCGAGCCCATCCGGCCCATTGACCCTGCGGCCTGGGTCTCCCACACTGCAGCCA CCATGGCCTCCCTGAATCAGGGTTGGAGGTCCGTGACCGCATGTGGCTCAAGATTACCATCCCTAATGCTTTCA CCAGCAACCTGCTGAAAGCTGGCTTCATCCGCCATACCGTCAACAAGATCACCTTCTCCGAGCAGTGCTACTACA TCTTCGGTGACCTCTGCGGCAACATGGCCAACCTGTCTCTCCACGATCACGATGGCTCCAGTGGCGCCTCTGACC AGGACACACTGGCCCCTTTGCCGCACCCGGGGGCCCCCCTTGGCCCATGGCTTTCCCGTACCAGTACCCGCCAC CCCCGCACCCATACAACCCGCACCCGGGCTTCCCGGAGCTGGGCTACAGCTACGGCGGGGGCAGCAGCAGTC CCGGGGACTCCAAGTCCGGGGGCAGCGCAATCGGACCACACCACACGCAGCAGCCTGCGGGGGCCGCGGG GCCTTCGCAGCCACCACACACCCGAGCTACGGTCCTCCCGGAGTGCCCCCTCTCTACGGCCCCCCATGCTGA AACTGACCGCCAGCAGACAGTCCTTCCGCATGGCCATGGGAAACCCCAGTGAGTTCTTTGTGGATGTGATGTGAG CAGGGCCCCTCCCCAGCTCCATTCCGCTCCCACCCCAGCCGGCTGCGTTCCTCTCTCCATCCGTCCTTTTT TACTTTGTCTGGTACCTGAAAGGGAAATAAAAGGAACTAAATCCAGGTGCGCTAACTGCTCGCAGGGTGCTGCGA GGGTGGGGTGCACCTACCGATTGGCTCTGCAGCCCCCTAACCTGCCTCTGGCCCCAGTTCGTTTCCTCTGCCCAC TAATCCCTGCGCAGGACTTCCCAGGACCCCTTTTGTCTCTGGGACCAGACTTGTTGGTGCTACCCCTTACTCCCC TCTGCAACCCCCATTTTGGGAGTTGACCCCAGCAATGACCTTGGTGGCACGCTCACTCCCTCATTCTCTCGTTTC CCCTTTAGCTCCCTTTCACCATTTATTCAGCTACATCATCCCTCTATTAACCCCACCCCATCAGGCACGTGTGCA AACCTCTTGACTTTACCCCACATTACTGAAACCAAAATATATTTGCTTCATCTGCCCCTACTAACCATCCCCCTG GATCAGAGGCCCAGAGGGCCCCCTCAGTTGCCTGAGCAGCTGGTGGCTTCCAGGGAGCATCTCTGCTCTACCCCT GCCCCATGCCTGCCTGCGTGCTGGTTCCTTCAGACCCCTAACCCTACTAACCAGCAGGCTCATCTCACCTCCAG GCCTGAAACATTTCTTTTCTTTTTTTCCTCCCCCAATTTTCCCTGGGCCTGGAGCAGCCAAGAATTTCGGGC TGTTTGACTTTCTGTGAGCCCCCAGCGAGGGGGGGGCCCAGCCTCCGAGGAGACCAGGAACCCTGCTTCAGCAGCC CCTCAGGGCTTCCCAAGGATGTCCAGCCCCACACCCACACGTTAACATAATGAGTCACTAGGCTTCTGGGGAGG GCCCAACTTCACCCATGCATGAGAGACTCTCCTCCTTTCCAGAGAGAATCGGATCGCACCACGTGTGGCAGCCTG GCATACACAGGTGCCTATGCAAGTTCATTTAAGCCTCAGGGCTGGTCCCTACCCAAAGGGCTGGACCCTCCTAAT

PCT/US2003/028547

FIGURE 1314B

CCTCTCCTAGGTTGTGGGGCTGGTCCCCTGACACCCTTCTCCCCTTCCTGGTAGACCTTAAACCTCGCACACATG TCCCCAGCATTTTCTCACCTGGATAAAGCCCATAAGCTGGGTCTCAGGCTGGGCTCAGCAAAGGACTCGCCTTGC AACCGACAGGCCATTCCCACCCCCACACACACCTCCCCTGTTTTCACATTCACCATGGCATCCCAGAGCAAGGA TTTCACCTTATTCTCTACTTTAAACAAATCATAACTTTCTCTTTTAAGCCTCTGCTATAAATTCTCCTGGCTCTCC TGGGCTTCCATATTTTGGGGGCTGGGGTGTCAAAAGTGAGATGAAGTTCTTAGCTCCAGGTTTTGGGGTAAACCA AGGTAGGAACATTTTGGCATTTATTTCAATTAACAATACTTCCTTGGACGGGTGCGGTGGCTCACGTCTGTAATC CCAGCACTTTGGGAGGCTGAGACAGGTGGATCACTTGAGGTCGGGAGTTCGAGACCAGCCTGGCCAACATAGCAA GCTGAGGCACAAGAATCGCTTGAATCCAGGAAGCAAGCGGAGGTTGCAGTGAGTTGAGATCGCACTCCAGCCTGG GTGACAGAGTGAGATTCTGTCTCAAAAGCAAACTAACAAAGAAAAACAATACTTCCTGGGGTTTTGGTGTGCAGA GGGCTTTGTTGGAAGTGTGACTCAATCTTGCCTGCCTTCTGGGAGCTCTAGAATTGTTCCCAACCCAGTCCATGG CTTCTAGCCACCACTACAGGGCTGTTTCATGTACTTCTCTCTGTACTCTGTCTTGTCCGACTCTCTTGAGAATT ATTTACTCCCAAAATGGAGTCATTCATCCTGATGTCCTCAATTGCTGCTGATATGCTGGTGATTCCCAAATACAT AGCTCCAACCCCCAACTTCCCCCAGACTTTAGATCTGTATTGGTATTACCTACTGGACATCTCTATGGACAGTTC CGTATAGACTCAACTCATCTGCCCAACCAAGTATGTTCCTCCTGAATTCCTCTCTGGTTACTTCATCACAATCT ACATAGGCTCACCAGCTAGAAACATTTATGAGCTTACATTCCTTCTCCCATATCTTATCAGCATATCATATCCA TTTCACTCCAACACTCTGTCTTGAATTTGGCCCTCCCTCTCCCCTCTCTACTTTAATTCATTGGAGCATGGGATT TGGAGTTAGGTGGTTTTGGGTTTGAATTCCAGCTCTACTATTTTTTGGTTGTGATAGAGTTATTTAACCTCTCT GATATTGTACGAAAAGTGCCTAGCACAGTGCCTGGCACACAGTAGAGTAGGTGCTCAATAAATGGTAGCTATTAT

GGGGCCGAGGACACCAGGTCTGTTCTCAGAGCGATGGGCCGCGGAGACTGATCTGCCGCCATGATTGGAGGCTTA TTCATCTATAATCACAAGGGGGAGGTGCTCATCTCCCGAGTCTACCGAGATGACATCGGGAGGAACGCAGTGGAT GCCTTTCGGGTCAATGTTATCCATGCCCGGCAGCAGCTGCGCAGCCCGTCACCAACATTGCTCGCACCAGCTTC TTCCACGTTAAGCGGTCCAACATTTGGCTGGCAGCAGTCACCAAGCAGAATGTCAACGCTGCCATGGTCTTCGAA TTCCTCTATAAGATGTGTGACGTGATGGCTGCCTACTTTGGCAAGATCAGCGAGGAAAACATCAAGAACAATTTT GTGCTCATATATGAGCTGCTGGATGAGATTCTAGACTTTGGCTACCCACAGAATTCCGAGACAGGCGCGCTGAAA ACTGGGCAGATTGGCTGGCGGCGAGAGGGTATCAAGTATCGTCGGAATGAGCTCTTCCTGGATGTGCTGGAGAGT GTGAACCTGCTCATGTCCCCACAAGGGCAGGTGCTGAGTGCCCATGTGTCGGGCCGGGTGGTGATGAAGAGCTAC $\tt CTGAGTGGCATGCCTGAATGCAAGTTTGGGATGAATGACAAGATTGTTATTGAAAAGCAGGGCAAAGGCACAGCT$ GATGAAACAAGCAAGAGCGGGAAGCAATCAATTGCCATTGATGACTGCACCTTCCACCAGTGTGTGCGACTCAGC AAGTTTGACTCTGAACGCAGCATCAGCTTTATCCCGCCAGATGGAGAGTTTGAGCTTATGAGGTATCGCACAACC AAGGACATCATCCTTCCGGGTGATCCCGCTAGTGCGAGAAGTGGGACGCACCAAACTGGAGGTCAAGGTG GTCATCAAGTCCAACTTTAAACCCTCACTGCTGGCTCAGAAGATCGAGGTGAGGATCCCAACCCCACTGAACACA AAGCGCATGGCAGGCATGAAGGAATCGCAGATCAGCGCAGAGATTGAGCTTCTGCCTACCAACGACAAGAAGAAA GTGTTTGAACCGAAGCTGAACTACAGCGACCATGATGTCATCAAATGGGTGCGCTACATTGGCCGCAGTGGCATT TATGAAACTCGCTGCTAGCTGCCACTAGGCAGCTAGCCCACCTCCCCAGCCACCTCCTCCACAGGTCCAGGTGC CGCTCCCTCCCCACCACCACCACTAGTGTCTCCTCCTCCTGCTTTGCTGCCTTTCCCTTTTGCACCAGCCCGAGTCT $\tt CTCCTGCTCTCCCATCCACCTGTCTGTCCTGGCCTAATGCCAGGCTCTGAGTTCTGTGACCAAAGCCAGGTGGGT$ AAAGGCCAGTAATGGATCCCCGGCCTCAGTCCCTACTCTGCTTTGGGATAGTGTGAGCTTCATTTTGTACACGTG TGACTTCGTCCAGTTACAAACCCAATAAACTCTGTAGAGTGG

GGTGGGCCCACACAAGCGGCGCACCGTTAAGATCGCGGCTGGGCTGCGGAAACGCGGCCGGTCCGGTTCCGCGGC CCAGGCAGAGGGACTCTGCAAGCAATGGCTGCAGCGCGCCTGGCAAGAGCGGCGCCTGCTGCTGCGGGAGCCGCG CTACACGCTGCTGGCCGCCTGCCTCGCCTGGCGGAGGTGGGCATCACCTTCTGGGTCATTCACAGGGTGGC ATACACAGAGATTGACTGGAAGGCCTACATGGCCGAGGTAGAAGGCGTCATCAATGGTACCTATGACTATACCCA ACTGCAGGGTGACACCGGACCACTTGTGTACCCAGCTGGTTTCGTGTACATCTTTATGGGGTTGTACTATGCCAC CAGCCGAGGCACTGACATCCGCATGGCCCAGAACATCTTTGCTGTGCTCTACCTGGCTACCTTGCTGCTTGTCTT CTTGATCTATCACCAGACCTGCAAGGTACCTCCCTTCGTCTTTTTCTTCATGTGCTGCGCCTCTTACCGTGTCCA CTCCATCTTTGTGCTGCGGCTCTTCAATGACCCAGTGGCCATGGTGCTGCTCTTCCTCAGTATCAACCTCCTGCT GGCCCAGCGCTGGGGCTGCTGCTTTTTCAGCCTGGCAGTCTCTGTGAAGATGAATGTGCTGCTCTTCGC CCCTGGGTTACTGTTTCTTCTCCTCACACAGTTTGGCTTCCGTGGGGCCCTCCCCAAGCTGGGAATCTGTGCTGG CCTTCAGGTGGTGCTGGGGCTGCCCTTCCTGCTGGAGAACCCCAGCGGCTACCTGTCCCGCTCCTTTGACCTTGG CCGCCAGTTTCTGTTCCACTGGACAGTGAACTGGCGCTTCCTCCCAGAGGCGCTCTTCCTGCATCGAGCCTTCCA CCTGGCCCTGTTGACTGCCCACCTCACCCTGCTCCTGCTGTTTGCCCTCTGCAGGTGGCACAGGACAGGGGAAAG TATCTTGTCGCTGCTGAGGGATCCCTCCAAAAGGAAGGTTCCACCCCAGCCCCTTACACCCAACCAGATCGTTTC CCACACACTGCCCTACCTCCTGTGGGCCATGCCTGCACGGTGGCTCACACACCTGCTCAGGTTGTTGGTGCTGGG GCTCATCGAGCTCTCCTGGAACACATACCCTTCCACATCCTGCAGCTCTGCTGCCCTGCACATATGCCATGCCGT CATCCTGCTGCAGCTCTGGCTGGGCCCGCAGCCTTTCCCCAAGAGCACCCAACACACAAGAAAGCCCAC<u>TGA</u>AG

MAAGLRKRGRSGSAAQAEGLCKQWLQRAWQERRLLLREPRYTLLVAACLCLAEVGITFWVIHRVAYTEIDWKAYM AEVEGVINGTYDYTQLQGDTGPDVYPAGFVYIFMGLYYATSRGTDIRMAQNIFAVLYLATLLLVFLIYHQTCKVP PFVFFFMCCASYRVHSIFVLRLFNDPVAMVLLFLSINLLLAQRWGWGCCFFSLAVSVKMNVLLFAPGLLFLLLTQ FGFRGALPKLGICAGLQVVLGLPFLLENPSGYLSRSFDLGRQFLFHWTVNWRFLPEALFLHRAFHLALLTAHLTL LLLFALCRWHRTGESILSLLRDPSKRKVPPQPLTPNQIVSTLFTSNFIGICFSRSLHYQFYVWYFHTLPYLLWAM PARWLTHLLRLVLGLIELSWNTYPSTSCSSAALHICHAVILLQLWLGPQPFPKSTQHSKKAH

1

MASPGAGRAPPELPERNCGYREVEYWDQRYQGAADSAPYDWFGDFSSFRALLEPELRPEDRILVLGCGNSALSYE LFLGGFPNVTSVDYSSVVVAAMQARYAHVPQLRWETMDVRKLDFPSASFDVVLEKGTLDALLAGERDPWTVSSEG VHTVDQVLSEVSRVLVPGGRFISMTSAAPHFRTRHYAQAYYGWSLRHATYGSGFHFHLYLMHKGGKLSVAQLALG AQILSPPRPPTSPCFLQDSDHEDFLSAIQL

GAGGCTGCGCGCGCAGGTTCCGGCTGCTGCGGCGTTGCGGCCGCAGGTTTGACTCCCGTGCGGTGCGGCCCAG CAGCCACAAAGCTCCCGCTGCCATTGCTCCTTGTACTCCCGCCGTCACTGCCGCTGTCCAACCCCTCCCCCGGGG CTTGCGCGGCGCTCCCACACCCCTCGGCCCGTGTACGCGCTCTGCACCTGCCCGAAAACATGTTGCAGAC ACCAGAGAGCAGGGGCTCCCGGTCCCGCAGGCCGAGGGGGAGAAGGATGGCGGCCATGATGGTGAGACCCGGGC CACCCGGAAAGGCGCGAGGGCCTTGGCGGCCAAAGCCTTGGCAAGGCGCAGGGCCTACCGCCGGCTGAATCGGAC GGTGGCGGAGTTGGTGCAGTTCCTCCTGGTGAAAGACAAGAAGAAGAGTCCCATCACACGCTCGGAGATGGTGAA ATACGTTATTGGAGACTTGAAGATTCTGTTCCCGGACATCATCGCAAGGGCCGCAGAGCATCTGCGGTATGTCTT TGGTTTTGAGCTGAAACAGTTTGACCGCAAGCACCACACTTACATCCTGATCAACAAACTAAAACCTCTGGAGGA ${\tt GGAGGAGGAGGAGTCTGGGAGGAGATGGCCCCAGATTGGGTCTGTTAATGATGATCCTGGGCCTTATCTATAT}$ GAGAGGTAATAGCGCCAGGAGGCCCAGGTCTGGGAGATGCTGCGTCGGTTGGGGGTGCAACCCTCAAAGTATCA TTTCCTCTTTGGGTATCCGAAGAGGCTTATTATGGAAGATTTTGTGCAGCAGCAGCATATCTCAGTTACAGGCGGGT GCCTCACACCAATCCACCAGAATATGAATTCTCTTGGGGTCCCCGAAGCAACCTGGAAATCAGCAAGATGGAAGT ${\tt CCTGGGGTTCGTGGCCAAACTGCATAAGAAGGAACCGCAGCACTGGCCAGTGCAGTACCGTGAGGCCCTAGCAGA}$ CGAGGCCGACAGGGCCAGAGCCAGAGCTGAAGCCAGTATGAGGGCCAGGGCCAGTGCTAGGGCCGGCAT CCACCTCTGGTGAGGGTTGGTGAAAAGTTGGCCAGTGGGTCCCCGTGAGGACGAACTACTGTCCTGAGTCATAAG TAATATGGGTGGGGCGAGGGTCTTATTTCTGTAGAAATCGTGTGACTTTAAGGATTTAGATTTTGTATCTTATGT TTTGTAACATTTAATAATTACTGTTAAAATGCTGTTTGTAAATGAGATTGGTCTACTTTTTCCTGTAGGATTTTA TTGTAGAGTTTTGCTGGTTTTGTAAAATGGATGGAAGAACTTTGTATTTATACTGTGATTTTGAACAGATTATGC AACATTGGAAGGAAGGCTGTACTTTGATGGTTTGAAGGAACTCAGCAGTATGATGATCTGGTTCCAGGGGAAAAA AATAGCTGGTTGGTGTCTAGCCCCCCAACACTTTTGTCTGTTGTGTATAAAAGAAGAAGAAGACTGGCATGTACCTT CATTTGCTTAGCTATTTGAGTATCTAGAGAAAAATTAAAATGCAATGAGTTAGCAGTATACCCTGGCACACTTAA TAAATTAAACATTTGTGGAGC

MLQTPESRGLPVPQAEGEKDGGHDGETRAPTASQERPKEELGAGREEGAAEPALTRKGARALAAKALARRRAYRR LNRTVAELVQFLLVKDKKKSPITRSEMVKYVIGDLKILFPDIIARAAEHLRYVFGFELKQFDRKHHTYILINKLK PLEEEEEEDLGGDGPRLGLLMMILGLIYMRGNSAREAQVWEMLRRLGVQPSKYHFLFGYPKRLIMEDFVQQRYLS YRRVPHTNPPEYEFSWGPRSNLEISKMEVLGFVAKLHKKEPQHWPVQYREALADEADRARAKARAEASMRARASA RAGIHLW

MCRGGRRFAPTKTWRRWHRRVNTTQKRYAICSALAASALPALVMSKGHRIEEVPELPLVFEDKVEGYKKTKEAVL LLKKLKAWNDIEKVYASQRMRAGTGKKPVVGKKGKKAAVGVKKQKKPLVGKKAAATKKPAPEKKPAEKKPTTEEK KPAA

MTGVKLVLNSRLWKALMEKACAKLLPFCEVLKTYSRCKLYTPMPGLINGIRGVRFPPEFSPPSENAAGTLIRCEA AASFGAVPSTPVLSPPSPGRCSGCTCLCHLPPPGALGGSASQTFPSNCFPPPPPNCGAPPSVSSREPPSPLGALE SPETVKASQLRDPPSTREPPHSRSGAPPPRRVESRSPRAPEPLAAPARRLPGTKPDRAAGGGGGQPGGGHPSYCT PTLKILNQPVNSSRLGLSDQWPDAPSDLPPAPAKPPHLRRPLSSPCSGPGGAGALTHARSGPGRLGERLGRTAPK TVNRSAHQRLDSAPQLPTRLERWPGPPRLAAPPAAIGPRP

· AATTCCGGTTGAAACCATCCCTCAGCTCCTAGAGGGAGATTGTTAGATCATGAAACTAATTACCATCCTTTTCCT $\tt CTGCTCCAGGCTACTAAGTTTAACCCAGGAATCACAGTCCGAGGAAATTGACTGCAATGACAAGGATTTATT$ TAAAGCTGTGGATGCTCTGAAGAAATATAACAGTCAAAACCAAAGTAACAACCAGTTTGTATTGTACCGCAT AACTGAAGCCACTAAGACGGTTGGCTCTGACACGTTTTATTCCTTCAAGTACGAAATCAAGGAGGGGGATTGTCC TGTTCAAAGTGGCAAAACCTGGCAGGACTGTGAGTACAAGGATGCTGCAAAAGCAGCCACTGGAGAATGCACGGC AACCGTGGGGAAGAGGAGCAGTACGAAATTCTCCGTGGCTACCCAGACCTGCCAGATTACTCCAGCCGAGGGCCC TGTGGTGACAGCCCAGTACGACTGCCTCGGCTGTGTGCATCCTATATCAACGCAGAGCCCAGACCTGGAGCCCAT GGCCCAAAGACAGGTGGTGGCTGGATTGAACTTTCGAATTACCTACTCAATTGTGCAAACGAATTGTTCCAAAGA GAATTTTCTGTTCTTAACTCCAGACTGCAAGTCCCTTTGGAATGGTGATACCGGTGAATGTACAGATAATGCATA CATCGATATTCAGCTACGAATTGCTTCCTTCACAGAACTGTGACATTTATCCAGGGAAGGATTTTGTACAACC ACCTACCAAGATTTGCGTGGGCTGCCCCAGAGATATACCCACCAACAGCCCAGAGCTGGAGGAGACACTGACTCA CACCATCACAAAGCTTAATGCAGAGAATAACGCAACTTTCTATTTCAAGATTGACAATGTGAAAAAAAGCAAGAGT ACAGGTGGTGGCTGGCAAGAAATATTTTATTGACTTCGTGGCCAGGGAAACCACATGTTCCAAGGAAAGTAATGA AGAGTTGACCGAAAGCTGTGAGACCAAAAAACTTGGCCAAAGCCTAGATTGCAACGCTGAAGTTTATGTGGTACC CTGGGAGAAAAAATTTACCCTACTGTCAACTGTCAACCACTGGGAATGATCTCACTGATGAAAAAGGCCTCCAGG TTTTTCACCTTTCCGATCATCACGAATAGGGGGAAATAAAAGAAGAACAACTAGTCACCTAAGGTCCTGCGAGTA TTTAAATAGAGAAGAATGCCATTTTATCACTCTGCCTCTGGGTGAAATAAAGATCAGTCTTGATGTTC

MKLITILFLCSRLLLSLTQESQSEEIDCNDKDLFKAVDAALKKYNSQNQSNNQFVLYRITEATKTVGSDTFYSFK
YEIKEGDCPVQSGKTWQDCEYKDAAKAATGECTATVGKRSSTKFSVATQTCQITPAEGPVVTAQYDCLGCVHPIS
TQSPDLEPILRHGIQYFNNNTQHSSLFMLNEVKRAQRQVVAGLNFRITYSIVQTNCSKENFLFLTPDCKSLWNGD
TGECTDNAYIDIQLRIASFSQNCDIYPGKDFVQPPTKICVGCPRDIPTNSPELEETLTHTITKLNAENNATFYFK
IDNVKKARVQVVAGKKYFIDFVARETTCSKESNEELTESCETKKLGQSLDCNAEVYVVPWEKKIYPTVNCQPLGM
ISLMKRPPGFSPFRSSRIGEIKEETTSHLRSCEYKGRPPKAGAEPASEREVS

GGCGGGAACTGAGGCGACTGTGGGGACATCAGTGATCGTAAGTCTCCTGGGCCCGTTATTCTCAGATTAGGTGAC GGAGCTAAGACTTCGAGACCATCTCGTCCTTTTTGTATCGCGGAAACCTGAGGAACGAGCCGGCGGCGGTGACCT CCGCTGACCAAGGATCGAGGAGTAGCTGCCAGTGCGGGAAGTAGCGGAGAAACAAGAAAGCCAAACCCGTTCCC TGGGTGGAAAAATATCGCCCAAAATGTGTGGATGAAGTTGCTTTCCAGGAAGAAGTGGTTGCAGTGCTGAAAAAA TCTTTAGAAGGAGCAGATCTTCCTAATCTCTTGTTTTACGGACCACCTGGAACTGGAAAAACATCCACTATTTTG GCAGCAGCTAGAGAACTCTTTGGGCCTGAACTTTTCCGATTAAGAGTTCTTGAGTTAAATGCATCTGATGAACGT GGAATACAAGTAGTICGAGAAAAGTGAAAAATTTTGCTCAATTAACTGTGTCAGGAAGTCGCTCAGATGGGAAG $\tt CCGTGTCCGCCTTTTAAGATTGTGATTCTGGATGAAGCAGATTCTATGACCTCAGCTGCTCAGGCAGCTTTAAGA$ CGTACCATGGAGAAGGAGTCGAAAACCACCCGATTCTGTCTTATCTGTAACTATGTCAGTCGAATAATTGAACCC CTGACCTCTAGATGTTCAAAATTCCGCTTCAAGCCTCTGTCAGATAAAATTCAACAGCAGCGATTACTAGACATT GCCAAGAAGGAAAATGTCAAAATTAGTGATGAGGGAATAGCTTATCTTGTTAAAGTGTCAGAAGGAGACTTAAGA AAAGCCATTACATTTCTTCAAAGCGCTACTCGATTAACAGGTGGAAAGGAGATCACAGAGAAAGTGATTACAGAC ATTGCTGGGGTAATACCAGCTGAGAAAATTGATGGAGTATTTGCTGCCTGTCAGAGTGGCTCTTTTGACAAACTA GTAGAAAATAACTTATCTGATAAACAGAAGTCTATTATCACAGAAAAACTTGCCGTAATTGACAAATGCCTAGCA GATGGTGCTGATGAACATTTGCAACTCATCAGCCTTTGTGCAACTGTGATGCAGCAGTTATCTCAGAATTGTTAA CGTGAATATATCTGGATGGGGGGTTTTGTAAATAATGAAGTTGTAATAAAAATAAAATGACCAAAAGCACC

CCTCCAACCACCTGCACGCCTGCCTGCCAGGGCCTCTCTGGGGCAGCCATGAAGTCCCTCGTCCTGCTCCTTTGT CTTGCTCAGCTCTGGGGCTGCCACTCAGCCCCACATGGCCCAGGGCTGATTTATAGACAACCGAACTGCGATGAT TTGAACCAGATTGATGAAGTAAAGGTGTGGCCTCAGCAGCCCTCCGGAGAGCTGTTTGAGATTGAAATAGACACC CTGGAAACCACCTGCCATGTGCTGGACCCCACCCCTGTGGCAAGATGCAGCGTGAGGCAGCTGAAGGAGCATGCT GTCGAAGGAGACTGTGATTTCCAGCTGTTGAAACTAGATGGCAAGTTTTCCGTGGTATACGCAAAATGTGATTCC AGTCCAGACTCAGCCGAGGACGTGCGCAAGGTGTGCCAAGACTGCCCCCTGCTGGCCCCGCTGAACGACACCAGG GTGGTGCACGCCGCGAAAGCTGCCCTGGCCGCCTTCAACGCTCAGAACAACGGCTCCAATTTTCAGCTGGAGGAA GCTAAAGAGGCCACAGAGCCAAGTGTAACCTGCTGGCAGAAAAGCAATATGGCTTTTGTAAGGCAACACTC AGTGAGAAGCTTGGTGGGGCAGAGGTTGCAGTGACCTGCACGGTGTTCCAAACACAGCCCGTGACCTCACAGCCC CAACCAGAAGGTGCCAATGAAGCAGTCCCCACCCCGTGGTGGACCCAGATGCACCTCCGTCCCCTCCACTTGGC GCACCTGGACTCCCTCCAGCTGGCTCACCCCCAGACTCCCATGTGTTACTGGCAGCTCCTCCAGGACACCAGTTG CACCGGGCGCACTACGACCTGCGCCACACCTTCATGGGTGTGTCTCATTGGGGTCACCCTCAGGAGAAGTGTCG CACCCCGGAAAACACGCACAGTGGTGCAGCCTAGTGTTGGTGCTGCTGGGCCAGTGGTTCCTCCATGTCCG $\tt GGGAGGATCAGACACTTCAAGGTC\underline{TAG} GCTAGACATGGCAGAGATGAGGGGGTTTGGCACAGAAAACATAGCCAC$ ${\tt CATTTTGTCCAAGCCTGGGCATGGGGGGGGCCTTGTCTGCTGGCCACGCAAGTGTCACATGCGATCTACATTA}$ AGAAGGCATTAGGTTGACAACTTGTCATGATTTTGACGGTAAGCCACCATGATTGTGTTCTCTGCCTCTGGTTGA CCTTACAAAAACCATTGGAACTGTGACTTTGAAAGGTGCTCTTGCTAAGCTTATATGTGCCTGTTAATGAAAGTG CCTGAAAGACCTTCCTTAATAAAGAAGGTTCTAAGCTG

MKSLVLLLCLAQLWGCHSAPHGPGLIYRQPNCDDPETEEAALVAIDYINQNLPWGYKHTLNQIDEVKVWPQQPSG ELFEIEIDTLETTCHVLDPTPVARCSVRQLKEHAVEGDCDFQLLKLDGKFSVVYAKCDSSPDSAEDVRKVCQDCP LLAPLNDTRVVHAAKAALAAFNAQNNGSNFQLEEISRAQLVPLPPSTYVEFTVSGTDCVAKEATEAAKCNLLAEK QYGFCKATLSEKLGGAEVAVTCTVFQTQPVTSQPQPEGANEAVPTPVVDPDAPPSPPLGAPGLPPAGSPPDSHVL LAAPPGHQLHRAHYDLRHTFMGVVSLGSPSGEVSHPRKTRTVVQPSVGAAAGPVVPPCPGRIRHFKV

TTTCTTTAAGAGGAAGACGCGGTCGTAGGTGCGAGGATTTCTGGTCCGCATGCTCCTGACTCACCGCTG
TTCGCTCTCGCCGCCGAGGAACAAGTCGGTCATGAAGCCGCAGCAGCCATGCTTTTAAGGATACCGGAAAAG
CACCCGTGGAGCCGGAGGTGGCAATTCACCGAATTCGAATCACCCTAACAAGCCGCAGCGTAAAATCCTTGGAAA
AGGTGGGTGCTGACTTGATCAGAGGCGCAAAAGCAAAGAATCTCAAAGTGAAAGGAGGAGTTCGAATGCCTTCCA
AGACTTTGAGAATCACTACAAGAAAAACTCCTTGTGGTGAAGGTTCTAAGACGTGGGATCGTTTCCAGATGAGAA
TTCACAAGCGACTCTTTGACTTGCACAGTCCTTCTGAGATTGTTAAGCAGATTACTTCCATCAGTACTGAGCCAG
GAGTTGAGGTGGAAGTCACCATTGCAGATGCTTAAGTCAACTATTTTAATAAATTGATTACCAGTTGTT

PCT/US2003/028547

FIGURE 1333

GGAAAGACTATGTTTAGGTGACCCGTGTGGCCTTTTTGTTGAGGCCCTTAAGGATACAAGGCCCCCACCTAAAGA TACAGACCTGCAGCTCCCCCCCCCCCCGCCCGCCCCCCTTTCTGTCTCCTCTCTCCCCTCCGTACTGGACGG CCCCGGTCCATTTCCGGGCTCCGGATATTTGGTATCGATTGGGGCCGGGGACGCGGAGCAGGTGGCCGCGGGGG TCAGCATCGACCAGTCCAAGCTGCCTGGAGTCAAGGAAGTATGCCGAGATTTTGCTGTCCTGGAGGACCACACCC TGGCTCACAGCCTGCAGGAACAAGAGATTGAGCATCATTTGGCATCGAACGTTCAGCGGAACCGTTTGGTCCAGC ATGATCTCCAGGTGGCTAAGCAGCTCCAAGAGGAAGATCTGAAAGCGCAGGCCCAGCTCCAGAAGCGCTACAAAG ACCTTGAACAACAAGACTGTGAAATTGCTCAGGAAATTCAGGAGAAGCTGGCTATTGAGGCAGAGAGACGACGCA TTCAGGAGAAGAAGGATGAGGACATAGCTCGCCTTTTGCAAGAAAAGGAGTTACAGGAAGAGAAAAAAGAGAAAAGA AACACTTTCCAGAGTTCCCTGCAACCCGTGCTTATGCAGATAGTTACTATTATGAAGATGGAGGAATGAAGCCAA GAGTGATGAAAGAAGCTGTATCTACTCCATCACGAATGGCCCACAGGGATCAGGAATGGTATGATGCTGAAATTG CCAGAAAACTGCAAGAAGAAGAACTTTTGGCTACCCAGGTGGACATGAGAGCCGCTCAAGTAGCTCAAGATGAAG AAATCGCTCGACTTCTAATGGCTGAAGAAAAGAAAGCTTACAAAAAAGCCAAGGAGCGGGAGAAATCATCTTTGG ACAAAAGAAAGCAAGACCCCGAGTGGAAGCCAAAAACAGCTAAAGCAGCAAATTCCAAGTCAAAAGAGAGTGATG AACCTCACCATTCTAAGAATGAAAGGCCAGCACGGCCACCACCACCTATCATGACAGATGGTGAAGATGCGGATT ACACTCATTTTACAAACCAGCAGAGTTCCACACGGCATTTCTCAAAATCAGAGTCCTCTCATAAAGGTTTTCATT ${\tt ACAAACAT} \underline{{\tt TAAA}} {\tt AAACCTAGGGAATCTGCCTTGAAAATGGACTCACTATAGCAAATATTACTGGGTGATACAGAATG}$ AATTCTACACTTACTTTTTTTCTCCTGTGTTTGCATTCCTGGGATTTATCCTCAAGTGCATTTCTGACCATAAGT AATTTTAATTCATTTCAAATGTTTTGGTTATTCATGATCACTTGGGCAGTATAAGAAAATGTAGCTTCTGAATAT TGGCCACCTCTATGCTGCATATACTTCTTGGGATATAGTATCTAAGACCTTTGTAAACTGCCATTTTGTTAGGTA ATGTTTGGATGCAACGCAGAATAAAAGAATATAAGAAATAGCTTTTTGTTGCATTAATGTATGATATTTTGAAGG ACAGAGCCTTTGCTTTTTGTATTCTTTAAGAAAAGCACAACCATAAAGTATTTTAAAAAAAGAAACACTTGGAGC AATTGAAATATGTTATTCTGACTAGATGGACTGTAGAGGTTTTGCATTTCTCAGCCCTCCTGGGGAGATTGGCCT AGATAGCATTCTTTAACACTTCCTCTGCTTTTGCCTCAGTAGCAAGGCTTTCCTAAGCTCCTGGGCAATGGAACA $\tt CTCTTCTTTTCATTTACTTGTAGAGCCAAGGAAATGGAATTGAAAGATGATTGCATAAGTAATGATGCCATCCT$ TCTCTCTGGCTGTAGACTGAGGCTTTTCTCTTGCTTCAAGTCAGAGCAGTATTTGTTGATAACCTCTCAATAATG TTTGGTTTACATGCCAGTAATTAAATTAATTCAACATGAAGTTGAATTTGATGAAGTGGTCATCTATCCAAGTAT TIGGTTTTTGTTTTGTTTTTTTTTTTGAGTTGGAGTCTCGCCCTGTCACACAGGCTGGAGTGCAGTGGTG CAATCTTGGCTCACTGCAACCTCCGCCACCTGGGCTGGAGCAATTCCCCTGCCTCAGCCTCCCAAGTAGCTGGAA TTACAGGCATGTGTCACCACCCCGGCTAATTTTTGTATTTTTAGTAAAGAGCGGGTTTCACCATGTTGGCCAGG CTGGTCTCGAACCCCTGACCTCAAGTGATCCACCTGC

MAEVSIDQSKLPGVKEVCRDFAVLEDHTLAHSLQEQEIEHHLASNVQRNRLVQHDLQVAKQLQEEDLKAQAQLQK RYKDLEQQDCEIAQEIQEKLAIEAERRRIQEKKDEDIARLLQEKELQEEKKRKKHFPEFPATRAYADSYYYEDGG MKPRVMKEAVSTPSRMAHRDQEWYDAEIARKLQEEELLATQVDMRAAQVAQDEEIARLLMAEEKKAYKKAKEREK SSLDKRKQDPEWKPKTAKAANSKSKESDEPHHSKNERPARPPPPIMTDGEDADYTHFTNQQSSTRHFSKSESSHK GFHYKH

1436/6881 FIGURE 1335A

CGTTGATATCAAAGACAGTTGAAGGAAATTTTGAAACTTCACGGTGTGCCACCCTACAGTACTGCCCTGAC CAGAGCACACAGACAAATGAATTCCTCAGTCCAGAGGTTTTCCAGCATATCTGGGATTTTCTGGAACAGCCTATA AGCATGGACTGTATCCGCATGCAGGACTCGGACCTGAGTGACCCCATGTGGCCACAGTACACGAACCTGGGGCTC CTGAACAGCATGGACCAGCAGATTCAGAACGGCTCCTCGTCCACCAGTCCCTATAACACAGACCACGCGCAGAAC TCCAACACCGACTACCCAGGCCCGCACAGTTTCGACGTGTCCTTCCAGCAGTCGAGCACCGCCAAGTCGGCCACC TGGACGTATTCCACTGAACTGAAGAAACTCTACTGCCAAATTGCAAAGACATGCCCCATCCAGATCAAGGTGATG ACCCCACCTCCTCAGGGAGCTGTTATCCGCGCCCATGCCTGTCTACAAAAAAGCTGAGCACGTCACGGAGGTGGTG AAGCGGTGCCCCAACCATGAGCTGAGCCGTGAATTCAACGAGGGACAGATTGCCCCTCCTAGTCATTTGATTCGA GTAGAGGGGAACAGCCATGCCCAGTATGTAGAAGATCCCATCACAGGAAGACAGAGTGTGCTGGTACCTTATGAG CCACCCAGGTTGGCACTGAATTCACGACAGTCTTGTACAATTTCATGTGTAACAGCAGTTGTGTTGGAGGGATG AACCGCCGTCCAATTTTAATCATTGTTACTCTGGAAACCAGAGATGGGCCAAGTCCTGGGCCGACGCTGCTTTGAG GCCCGGATCTGTGCTTGCCCAGGAAGAGACAGGAAGGCGGATGAAGATAGCATCAGAAAGCAGCAAGTTTCGGAC AAACGAAGATCCCCAGATGATGAACTGTTATACTTACCAGTGAGGGGCCGTGAGACTTATGAAATGCTGTTGAAG ATCAAAGAGTCCCTGGAACTCATGCAGTACCTTCCTCAGCACACTTGAAACGTACAGGCAACAGCAGCAG CAGCACCAGCACTTACTTCAGAAACAGACCTCAATACAGTCTCCATCTTCATATGGTAACAGCTCCCCACCTCTG AACAAAATGAACAGCATGAACAAGCTGCCTTCTGTGAGCCAGCTTATCAACCCTCAGCAGCGCAACGCCCTCACT CCTACAACCATTCCTGATGGCATGGGAGCCAACATTCCCATGATGGCCACATGCCCAATGGCTGGAGACATG CCGTATCCCACAGATTGCAGCATTGTCAGTTTCTTAGCGAGGTTGGGCTGTTCATCATGTCTGGACTATTTCACG ACCCAGGGGCTGACCACCATCTATCAGATTGAGCATTACTCCATGGATGATCTGGCAAGTCTGAAAATCCCTGAG CAATTTCGACATGCGATCTGGAAGGGCATCCTGGACCACCGGCAGCTCCACGAATTCTCCTCCCCTTCTCATCTC $\tt CTGCGGACCCCAAGCAGTGCCTCTACAGTCAGTGTGGGCTCCAGTGAGACCCGGGGTGAGCGTGTTATTGATGCT$ GTGCGATTCACCCTCCGCCAGACCATCTCTTTCCCACCCCGAGATGAGTGGAATGACTTCAACTTTGACATGGAT TCCTAACTGCCAGCYCCCTAAAAGCACTCCTGCTTAATCTTCAAAGCCTTCTCCCTAGCTCCTCCCCTTCCTCTT GTCTGATTTCTTAGGGGAAGGAAGTAAGAGGCTACCTCTTACCTAACATCTGACCTGGCATCTAATTCTGATT CTGGCTTTAAGCCTTCAAAACTATAGCTTGCAGAACTGTAGCTGCCATGGCTAGGTAGAAGTGAGCAAAAAAAGAG TTGGGTGTCTCCTTAAGCTGCAGAGATTTCTCATTGACTTTTATAAAGCATGTTCACCCTTATAGTCTAAGACTA ATGAAAGAAAATTGAGTTGCACTTATTGACCATTTTTTAATTTACTTGTTTTTGGATGGCTTGTCTATACTCCTTC CTTTCAGTTCTTTGGATTCTAAATACATGCCACATCAAACCTTTGAGTAGATCCATTTCCATTGCTTATTATGTA GGTAAGACTGTAGATATGTATTCTTTTCTCAGTGTTGGTATATTTTATATTACTGACATTTCTTCTAGTGATGAT GAATGAGGAAAATTCTTAAAAGGCCCATAGCAGCCAGTTCAAAAACACCCGACGTCATGTATTTGAGCATATCAG GTATTAAAACTAAATTTCACTACTAGATTGACTAACTCAAATACACATTTGCTACTGTTGTAAGAATTCTGATTG ATTTGATTGGGATGAATGCCATCTATCTAGTTCTAACAGTGAAGTTTTACTGTCTATTAATATTCAGGGTAAATA GGAATCATTCAGAAATGTTGAGTCTGTACTAAACAGTAAGATATCTCAATGAACCATAAATTCAACTTTGTAAAA TATTCTATAAAACTCTGCATGTAGAGGCTTGTTTACCTTTCTCTCTAAGGTTTACAATAGGAGTGGTGATTTG AAAAATATAAAATTATGAGATTGGTTTTCCTGTGGCATAAATTGCATCACTGTATCATTTTCTTTTTTAACCGGT AAGAGTTTCAGTTTGTTGGAAAGTAACTGTGAGAACCCAGTTTCCCGTCCATCTCCCTTAGGGACTACCCATAGA CATGAAAGGTCCCCACAGAGCAAGAGATAAGTCTTTCATGGCTGCTGTTGCTTAAACCACTTAAACGAAGAGTTC

FIGURE 1335B

CCTTGAAACTTTGGGAAAACATGTTAATGACAATATTCCAGATCTTTCAGAAATATAACACATTTTTTTGCATGC ATGCAAATGAGCTCTGAAATCTTCCCATGCATTCTGGTCAAGGGCTGTCATTGCACATAAGCTTCCATTTTAATT TTAAAGTGCAAAAGGGCCAGCGTGGCTCTAAAAGGTAATGTGTGGATTGCCTCTGAAAAGTGTGTATATTTTTG GAAACCTTTTTTTATCGTTTTTGTATTTTCATGAAAATACCATTTAGTAAGAATACCACATCAAATAAGAAATAA ATGAGTCCTTGATTTCAAAGTTTTGTTGTACTTAAATGGTAATAAGCACTGTAAACTTCTGCAACAAGCATGCAG CTTTGCAAACCCATTAAGGGGAAGAATGAAAGCTGTTCCTTGGTCCTAGTAAGAAGACAAACTGCTTCCCTTACT TTGCTGAGGGTTTGAATAAACCTAGGACTTCCGAGCTATGTCAGTACTATTCAGGTAACACTAGGGCCTTGGAAA TTCCTGTACTGTGTCTCATGGATTTGGCACTAGCCAAAGCGAGGCACCCTTACTGGCTTACCTCCTCATGGCAGC CTACTCTCCTTGAGTGTATGAGTAGCCAGGGTAAGGGGTAAAAGGATAGTAAGCATAGAAACCACTAGAAAGTGG GTTAAAAGTTTTATATGCTTTATTAATGTTTTCAAAAGGTATTATACATGTGATACATTTTTTAAGCTTCAGTTG GACATGCAATAAAATTAAAAAATAAATAAAACTAATTAAGAAATAAA

MNFETSRCATLQYCPDPYIQRFVETPAHFSWKESYYRSTMSQSTQTNEFLSPEVFQHIWDFLEQPICSVQPIDLN FVDEPSEDGATNKIEISMDCIRMQDSDLSDPMWPQYTNLGLLNSMDQQIQNGSSSTSPYNTDHAQNSVTAPSPYA QPSSTFDALSPSPAIPSNTDYPGPHSFDVSFQQSSTAKSATWTYSTELKKLYCQIAKTCPIQIKVMTPPPQGAVI RAMPVYKKAEHVTEVVKRCPNHELSREFNEGQIAPPSHLIRVEGNSHAQYVEDPITGRQSVLVPYEPPQVGTEFT TVLYNFMCNSSCVGGMNRRPILIIVTLETRDGQVLGRRCFEARICACPGRDRKADEDSIRKQQVSDSTKNGDGTK RPFRQNTHGIQMTSIKKRRSPDDELLYLPVRGRETYEMLLKIKESLELMQYLPQHTIETYRQQQQQQHQHLLQKQ TSIQSPSSYGNSSPPLNKMNSMNKLPSVSQLINPQQRNALTPTTIPDGMGANIPMMGTHMPMAGDMNGLSPTQAL PPPLSMPSTSQCTPPPPYPTDCSIVSFLARLGCSSCLDYFTTQGLTTIYQIEHYSMDDLASLKIPEQFRHAIWKG ILDHRQLHEFSSPSHLLRTPSSASTVSVGSSETRGERVIDAVRFTLRQTISFPPRDEWNDFNFDMDARRNKQQRI KEEGE

ATGCCTGCTGCCACGTGGCTGGTCCTCCTCCTCCTGCTGTGGCTGAGCCTTGGGGTGAAGACAGCTTCTCAGATG ACCAAGATGGTGCTGCAGATGGTGCTGAGGATGGAGAACCCACCAAGCCCCGCTAGGAGCCACCTAGACTGGATG CAGAGCATGGAAATAAGCCTCGGTGTGGAGAGGGCCTGTCCTCAGGGCCTGGCAGATGTAGGCGATTCTTACCAC GTCTCCTTCGCTACCCCGAAAGGCACAATCATAGGCCTTTCTCGTCTTTTAAGGGTTTTTACTTCCATGGGGAAC TATGTGTTGGATGAGAAAAGTATCCGGGGAAGGGGACAGAGGTTCAGAAAGCTCTGCGAGTCCTGGACGCTGGTC TGCCTTCTTGGCTCACCCTGGAAGGTGGACGCTGGCCCCACACATCCCCTCTTAAAGACGCAGGCCGATAGCCAG CAGATCCTGGGGCTTGCTGGCCCCAAAGCAGACACTGCGATGACAACGGACGACACAGAAGTGCCCGCTATGACT CTAGCACCGGGCCACGCCGCTCTGGAAACTCAAACGCTGAGCGCTGAGACCTCTTCTAGGGCCTCAACCCCAGCC GGCCCCATTCCAGAAGCAGAGACCAGGGGAGCCAAGAGAATTTCCCCTGCAAGAGAGACCAGGAGTTTCACAAAA ACATCTCCCAACTTCATGGTGCTGATCGCCACCTCCGTGGAGACATCAGCCGCCAGTGGCAGCCCCGAGGGAGCT GGAATGACCACAGTTCAGACCATCACAGGCAGTGATCCCAGGGAAGCCATCTTTGACACCCTTTGCACCGATGAC AGCTCTGAAGAGGCAAAGACACTCACAATGGACATATTGACATTGGCTCACACCTCCACAGAAGCTAAGGGCCTG TCCTCAGAGAGCAGCCCCTCTTCCGACAGCCCCCATCCAGTCATCACCCCGTCACGGGCCTCAGAGAGCAGCGCC TCTTCCGACGGCCCCCATCCAGTCATCACCCCGTCACGGGCCTCAGAGAGCAGCGCCTCTTCCGACGGCCCCCAT CCAGTCATCACCCCGTCACGGGCCTCAGAGAGCAGCGCCTCTTCCGACGGCCCCCATCCAGTCATCACCCCGTCA CGGGCCTCAGAGAGCAGCGCCTCTTCCGACGGCCCCCATCCAGTCATCACCCCGTCACGGGCCTCAGAGAGCAGC GCCTCTTCCGACGGCCCCATCCAGTCATCACCCCGTCACGGGCCTCAGAGAGCAGCGCCTCTTCCGACGGCCCC CATCCAGTCATCACCCCGTCACGGGCCTCAGAGAGCAGCGCCTCTTCCGACGGCCCCCATCCAGTCATCACCCCG TCACGGGCCTCAGAGAGCAGCGCCTCTTCCGACGGCCCCCATCCAGTCATCACCCCGTCACGGGCCTCAGAGAGC AGCGCCTCTTCCGACGGCCTCCATCCAGTCATCACCCCGTCACGGGCCTCAGAGAGCAGCGCCTCTTCCGACGGC CCCCATCCAGTCATCACCCCGTCACGGGCCTCAGAGAGCAGCGCCTCTTCCGACGGCCCCCATCCAGTCATCACC CCCTCATGGTCCCCGGGATCTGACGTCACTCTCCTCGCTGAAGCCCTGGTGACTGTCACAAACATCGAGGTTATT AATTGCAGCATCACAGAAATAGAAACAACGACTTCCAGCATCCCTGGGGCCTCAGACACAGATCTCATCCCCACG GAAGGGGTGAAGGCCTCGTCCACCTCCGATCCACCAGCTCTGCCTGACTCCACTGAAGCAAAACCACACATCACT GAGGTCACAGCCTCTGCCGAGACCCTGTCCACAGCCGGCACCACAGAGTCAGCTGCACCTGATGCCACGGTTGGG ACCCCACTCCCCACTAACAGCGCCACAGAAAGAGAAGTGACAGCACCCGGGGCCACGACCCTCAGTGGAGCTCTG GTCACAGTTAGCAGGAATCCCCTTGAAGAAACCTCAGCCCTCTCTGTTGAGACACCAAGTTACGTCAAAGTCTCA GGAGCAGCTCCGGTCTCCATAGAGGCTGGGTCAGCAGTGGGCAAAACAACTTCCTTTGCTGGGAGCTCTGCTTCC TCCTACAGCCCCTCGGAAGCCGCCCTCAAGAACTTCACCCCTTCAGAGACACCGACCATGGACATCGCAACCAAG AGCACCTTAGCCAAGATCACAACCTCAGCGAAGACCACGATGAAGCCCCCAACAGCCACGCCCACGACTGCCCGG ACGAGGCCGACCACAGACGTGAGTGCAGGTGAAAATGGAGGTTTCCTCCTCCTGCGGCTGAGTGTGGCTTCCCCG GAAGACCTCACTGACCCCAGAGTGGCAGAAAGGCTGATGCAGCAGGAGAGGCTAACGGACATCAGCTGCAGCCAG GCATGTCCCGTATGCCAAAAGAGGGTGCTGCCCCTAGCCTGGGCCCCCACCGACAGACTGCAGCTGCGTTACTGT GCTGAGAGGTACCCAGAAGGTTCCCATGAAGGGCAGCATGTCCAAGCCCCTGACCCCAGATGTGGCAACAGGACC CTCGCTCACATCCACCGGAGTTTTGTTACATTGTACGTGCTCGAGGACAAGCAGCCGGTAGTATTCACCTCTGTC ATCACAGAAGCTGGCGTGGAGCCCTCCACATGA

MTTDDTEVPAMTLAPGHAALETQTLSAETSSRASTPAGPIPEAETRGAKRISPARETRSFTKTSPNFMVLIATSV ETSAASGSPEGAGMTTVQTITGSDPREAIFDTLCTDDISEEAKTLTMDILTLAHTSTEAKGLSSESSASSDGPHP VITPSRASESSASSDGLHPVITPSRASESSASSDGPHPVITPSWSPGSDVTLLAEA LVTVTNIEVINCSITEIETTTSSIPGASDTDLIPTEGVKASSTSDPPALPDSTNTKPHITEVTASAETLSTAGTT ESAAPDATIGTPLPTNSTIEREVTAPGATTLSGALATGNPLEETSALSVETPSYVKVSGAAPVSIEAGSAVGKTT SFAGSSASSYSPLEAALKNFTPSETLTTDIATKGPFPTSRAPLPSVPPTTTNSS

1442/6881 FIGURE 1340A

ACGCCACCCTCTTCCTGTCACCAGCCTTTCCTCAGTATCCACAGGTCACGCCACCCCTCTTGCTGTCAGCAGTG CTACCTCAGCTTCCACAGTATCCTCGGACTCCCCTCTGAAGATGGAAACACCAGGAATGACAACACCGTCACTGA AGACAGACGGTGGGAGACGCACAGCCACATCACCACCCCCCACAACCTCCCAGACCATCATTTCCACCATTCCCA ATGGGGCAGGCGCGGGGACCTGGAGTTCGTCAGGAGGACCGTGGACTTCACCTCCCCACTCTTCAAGCCGGCGA CTGGCTTCCCCCTTGGCTCCTCTCCCTGATTCCCTCTACTTCACAGACAATGGCCAGATCATCTTCCCAGAGT CAGACTACCAGATTTTCTCCTACCCCAACCCACTCCCAACAGGCTTCACAGGCCGGGACCCTGTGGCCCTGGTGG CTCCGTTCTGGGACGATGCTGACTTCTCCACTGGTCGGGGGACCACATTTTATCAGGAATACGAGACGTTCTATG GGTGGGCCCTAAAGGTCACGTGGGTCAATGCCCACGCCTATCCTGCCCAGTGGACCCTCGGGAGCAACACCTACC AAGCCATCCTCCACGGACGGGAGCAGGTCCTATGCCCTGTTTCTCTACCAGAGCGGTGGGATGCAGTGGGACG TGGCCCAGCGCTCAGGCAACCCGGTGCTCATGGGCTTCTCTAGTGGAGATGGCTATTTCGAAAACAGCCCACTGA TGTCCCAGCCAGTGTGGGAGAGGTATCGCCCTGATAGATTCCTGAATTCCAACTCAGGCCTCCAAGGGCTGCAGT GGCCCAGCTGGGGCTGGAACCAGGTCTCCTGCCCTTGTTCCTGGCAGCAGGGACGACGGGACTTACGATTCCAAC CCGTCAGCATAGGTCGCTGGGGCCTCGGCAGTAGGCAGCTGTGCAGCTTCACCTCTTGGCGAGGAGGCGTGTGCT GCAGCTACGGGCCCTGGGGAGAGTTTCGTGAAGGCTGGCACGTGCAGCGTCCTTGGCAGTTGGCCCAGGAACTGG AGCCACAGAGCTGGTGCTGCCGCTGGAATGACAAGCCCTACCTCTGTGCCCTGTACCAGCAGAGGCGGCCCCACG TGGGCTGTGCTACATACAGGCCCCACAGCCCGCCTGGATGTTCGGGGACCCCCACATCACCACCTTGGATGGTG ${\tt AGGGCCGCACCGCCCAGACTGGCCCAGGCCAGCCAACTTCATCGCCTTTGCGGCTCAGTACCGCTCCAGCA}$ GCCTGGGCCCCGTCACGGTCCAATGGCTCCTTGAGCCTCACGACGCAATCCGTGTCCTGCTGGATAACCAGACTG TGACATTTCAGCCTGACCATGAAGACGGCGGAGGCCAGGAGACGTTCAACGCCACCGGAGTCCTCCTGAGCCGCA ACGGCTCTGAGGTCTCGGCCAGCTTCGACGGCTGGGCCACCGTCTCGGTGATCGCGCTCTCCAACATCCTCCACG CCTCCGCCAGCCTCCCGCCCGAGTACCAGAACCGCACGGAGGGGCTCCTGGGGGTCTGGAATAACAATCCAGAGG ACGACTTCAGGATGCCCAATGGCTCCACCATTCCCCCAGGGAGCCCTGAGGAGATGCTTTTCCACTTTGGAATGA CCTGGCAGATCAACGGGACAGGCCTCCTTGGCAAGAGGAATGACCAGCTGCCTTCCAACTTCACCCCTGTTTTCT ACTCACAACTGCAAAAAAACAGCTCCTGGGCTGAACATTTGATCTCCAACTGTGACGGAGATAGCTCATGCATCT ATGACACCCTGGCCCTGCGCAACGCAAGCATCGGACTTCACACGAGGGAAGTCAGTAAAAACTACGAGCAGGCGA ACGCCACCCTCAATCAGTACCCGCCCTCCATCAATGGTGGTCGTGTGATTGAAGCCTACAAGGGGCAGACCACGC TGATTCAGTACACCAGCAATGCTGAGGATGCCAACTTCACGCTCAGAGACAGCTGCACCGACTTGGAGCTCTTTG AGAATGGGACGTTGCTGTGGACACCCAAGTCGCTGGAGCCATTCACTCTGGAGATTCTAGCAAGAAGTGCCAAGA TTGGCTTGGCATCTGCACTCCAGCCCAGGACTGTGGTCTGCCATTGCAATGCAGAGAGCCAGTGTTTGTACAATC AGACCAGCAGGGTGGGCAACTCCTCCCTGGAGGTGGCTGCCAAGTGTGACGGGGGCACCTTCGGCCGCTACT GCGAGGGCTCCGAGGATGCCTGTGAGGAGCCGTGCTTCCCGAGTGTCCACTGCGTTCCTGGGAAGGGCTGCGAGG CCTGCCCTCCAAACCTGACTGGGGATGGGCGGCACTGTGCGGGTCTTGGGGAGCTCTTTCCTGTGTCAGAACCAGT CCTGCCCTGTGAATTACTGCTACAATCAAGGCCACTGCTACATCTCCCAGACTCTGGGCTGTCAGCCCATGTGCA TTCCCTTAAGAGTCATCCAGCTCTTGCTCAGTGAAGAGGAAAATGCCTCCATGGCAGAAGTCAACGCCTCGGTGG CATACAGACTGGGGACCCTGGACATGCGGGCCTTTCTCCGCAACAGCCAAGTGGAACGAATCGATTCTGCAGCAC CGGCCTCGGGAAGCCCCATCCAACACTGGATGGTCATCTCGGAGTTCCAGTACCGCCCTCGGGGCCCGGTCATTG ACTTCCTGAACAACCAGCTGCTGGCCGCGGTGGTGGAGGCGTTCTTATACCACGTTCCACGGAGGAGTGAGGAGC CCAGGAACGACGTGGTCTTCCAGCCCATCTCCGGGGAAGACGTGCGCGATGTGACAGCCCTGAACGTGAGCACGC TGAAGGCTTACTTCAGATGCGATGGCTACAAGGGCTACGACCTGGTCTACAGCCCCCAGAGCGGCTTCACCTGCG TGTCCCCGTGCAGTAGGGGCTACTGTGACCATGGAGGCCAGTGCCAGCACCTGCCCAGTGGGCCCCGCTGCAGCT GTGTGTCCTTCTCCATCTACACGGCCTGGGGCGAGCACTGTGAGCACCTGAGCATGAAACTCGACGCGTTCTTCG GCATCTTCTTTGGGGCCCTGGGGCGCCTCTTGCTGCTGGGGGTCGGGACGTTCGTGGTCCTGCGCTTCTGGGGTT GCTCCGGGGCCAGGTTCTCCTATTTCCTGAACTCAGCTGAGGCCTTGCCTTGAAGGGGCAGCTGTGGCCTAGGCT

1443/6881 FIGURE 1340B

 ${\tt ACCTCAAGACTCACCTCATCCTTACCGCACATTTAAGGCGCCATTGCTTTTGGGAGACTGGAAAAGGGAAGGTGACTGAAGGCTGTCAGGATTCTT}$

WO 2004/030615 PCT/US2003/028547

1444/6881 FIGURE 1341

AGTTCTGTGGAGCAGCGGTGGCCGGCTAGGATGGGCTGTCTCTGGGGTCTGGCCCCTTTTCTTCTTCTGC TGGGAGGTTGGGGTCTCTGGGAGCTCTGCAGGCCCCAGCACCCGCAGAGCAGACACTGCGATGACAACGGACGAC ACAGAAGTGCCCGCTATGACTCTAGCACCGGGCCACGCCGCTCTGGAAACTCAAACGCTGAGCGCTGAGACCTCT TCTAGGGCCTCAACCCCAGCCGGCCCCATTCCAGAAGCAGAGACCAGGGGAGCCAAGAGAATTTCCCCTGCAAGA GAGACCAGGAGTTTCACAAAAACATCTCCCAACTTCATGGTGCTGATCGCCACCTCCGTGGAGACATCAGCCGCC AGTGGCAGCCCGAGGGAGCTGGAATGACCACAGTTCAGACCATCACAGGCAGTGATCCCGAGGAAGCCATCTTT GACACCCTTTGCACCGATGACAGCTCTGAAGAGGCAAAGACACTCACAATGGACATATTGACATTGGCTCACACC TCCACAGAAGCTAAGGGCCTGTCCTCAGAGAGCAGTGCCTCTTCCGACGGCCCCCATCCAGTCATCACCCCGTCA CGGGCCTCAGAGAGCAGCGCCTCTTCCGACGGCCCCCATCCAGTCATCACCCCGTCACGGGCCTCAGAGAGCAGC GCCTCTTCCGACGGCCCCATCCAGTCATCACCCCGTCACGGGCCTCAGAGAGCAGCGCCTCTTCCGACGGCCCC CATCCAGTCATCACCCCGTCATGGTCCCCGGGATCTGATGTCACTCTCCTCGCTGAAGCCCCTGGTGACTGTCAC AAACATCGAGGTTATTAATTGCAGCATCACAGAAATAGAAACAACAACTTCCAGCATCCCTGGGGCCTCAGACAT AGATCTCATCCCCACGGAAGGGGTGAAGGCCTCGTCCACCTCCGATCCACCAGCTCTGCCTGACTCCACTGAAGC AAAACCACACATCACTGAGGTCACAGCCTCTGCCGAGACCCTGTCCTCAGCCCTCTCTGTTGAGACACCAAGTTA CGTCAAAGTCTCAGGAGCAGCTCCGGTCTCCATAGAGGCTGGGTCAGCAGTGGGCAAAACAACTTCCTTTGCTGG GAGCTCTGCTTCCTCCTACAGCCCCTCGGAAGCCGCCCTCAAGAACTTCACCCCTTCAGAGACACCGACCATGGA CCGAGGGACGAACAGCACCTTAGCCAAGATCACAACCTCAGCGAAGACCACGATGAAGCCCCCAACAGCCACGCC CACGACTGCCCGGACGAGGCCGACCACAGACGTGAGTGCAGGTGAAAATGGAGGTTTCCTCCTCCTGCGGCTGAG TGTGGCTTCCCCGGAAGACCTCACTGACCCCAGAGTGGCAGAAAGGCTGATGCAGCAGCTCCACCGGGAACTCCA CGCCCACGCGCCTCACTTCCAGGTCTCCTTACTGCGTGTCAGGAGAGGCTAACGGACATCAGCTGCAGCCAGGCA TGTCCCGTATGCCAAAAGAGGGTGCTGCCCCTAGCCTGGGCCCCCACCGACAGACTGCAGCTGCGTTACTGTGCT GAGAGGTACCCAGAAGGTTCCCATGAAGGGCAGCATGTCCAAGCCCCTAACCCCAGATGTGGCAACAGGACCCTC GCTCACATCCACCGGAGTGTATGTATGGGGAGGGGGTTCACCTGTTCCCAGAGGTGTCCTTGGACTCACCTTGGC ACATGTTCTGTGTTTCAGTAAAGAGAGACCTGATCACCCATCTGTGTGCTTCCATCCTGCATTAAAATTCACTCA GTGTGGCCCAG

MGCLWGLALPLFFFCWEVGVSGSSAGPSTRRADTAMTTDDTEVPAMTLAPGHAALETQTLSAETSSRASTPAGPI
PEAETRGAKRISPARETRSFTKTSPNFMVLIATSVETSAASGSPEGAGMTTVQTITGSDPEEAIFDTLCTDDSSE
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TPSRASESSASSDGPHPVITPSWSPGSDVTLLAEALVTVTNIEVINCSITEIETTTSSIPGASDIDLIPTEGVKA
SSTSDPPALPDSTEAKPHITEVTASAETLSTAGTTESAAPHATVGTPLPTNSATEREVTAPGATTLSGALVTVSR
NPLEETSALSVETPSYVKVSGAAPVSIEAGSAVGKTTSFAGSSASSYSPSEAALKNFTPSETPTMDIATKGPFPT
SRDPLPSVPPTTTNSSRGTNSTLAKITTSAKTTMKPPTATPTTARTRPTTDVSAGENGGFLLLRLSVASPEDLTD
PRVAERLMOOLHRELHAHAPHFQVSLLRVRRG

GGGCCGCACTGGACCAGGGATGAGAGTGGGTGCCCGGGACTCGCCTATACTGCCTGGGGGTGCAGCCCGCACTCC GTGGGCTTTGGAATATAAGCCCTTTCATCTTCTCCGCTGGTCCTCACCACGTTGGCAAGGCAGGTATTGTGACCC TGTTTTCTCAGGTGAGGACATGGAGGCTGGGAGGGGTCTAGAGACTGGCCTGGCTAGTAGGAGGCTGAGTCAGGA TTTGAACCAGCAGATCATCTGACCCCAGAGCCGGTCGTGGGCGGCACAGCGGGAGCTGCAACCGAGGCTCTTGAC TCCTGCCTCGTCATTCCCTGAGGTCCACAGGACAACCAGCTGGGGACCTGGAGCCCCATCCTGACGTCCTGGGGA GAGGTGCTAGGCCCCTTTTGGGTCTATGAGCTACTTTTGGGCCAGTGGAGCCGGGTAAAGACCATCTCAAACCCT GTGCCAGGGGAGGTCAGACTCCAAGAGCGCCACCTTTGGGCTTCCAGCTGTGTGGGCTGCACCAAGAAGGCTCAG AGAATTAGGGGGTTCGTATTTGATCCTTTTCCTTCCAAGACTGGGATTACCAGATAAAACACAGGGCATCCAGTT ACATTTGAATTTCAGGTAACAATTTTTTTTTAAGTGTAAGTACGTAGCCAATATTGCATGAGAAAATACTCATGCT AAAAAGTTATTCGTCATTTATCTGAACTGCGAGTTCAAATTTAACCGAGTACCCTGTATTTTTATTTGCTAAATC TAGAAACCCTCTCCAAGAGACTCCTTGGCCCACTCACAGGGAGAGCCCGATCTCCCTCTAGACAGGGGAGGCCCC CTTTCTCAGGCCAGAAAAGATCTTGTAGTAAACTACTCAAGAGGCTGAGGCAGGAGGATCGCTTGAGCCCAGGAA TCCCATTCCTCCACCTCAGGGCCAGTCAAGGGAACAGGCCTCTGCTCTGGGCAGAAGTGCCGGCAGCCGCTCTC TGAAAAGCTAGGTGTTGCCTCAGGGGCTCCCGGTGTCCTGTGGAAAATGCCTGGCCACGGTTTCCATGGTTCCCA GGCTCCAACCCTGCAGTTCTCGGCCCTCATTCAGGAGGGGCCTCGGCAGGGTGGGGGGGTGCCGTCTTTCCCTTGC CGGAGCCCCAAGGACTCTGCCGGCTCCCTCGCTTTGGCAGCACCACCCTGTCTCTGGAGGTTCCCCCG CCTCAATCCACCCAGCTACCCCGAAAGGCACAATCATAGGCCTTTCTCGTCTTTTAAGGGTTTTTACTTCCATG GGGAACTATGTGTTGGATGAGAAAGTACCCGGGGAAGGCGACAGAGGTTCAGAAAGCTCTGCGAGTCCTGGACG CTGGTCTGCCTTCTTGGCTCACCCTGGAAGGTGGACGCTGGCCCCACACATCCCCTCTTAAAGACGCAGGCCGAT AGCCAGCAGATCCTGGGGCTTGCTGGCCCCAAGTGAGTTGTCAGGGTTTCAGAGGACGCCAGTCATGGCAACCCC AGCTCCATGGCTGCCACACAGGCCTGGGCTTCCCAGGACTGCCTCCTTCTTGTTCGCTTATGTAGATGAAAAATG AGGTAACGGCACTCCCCTGCCCCACCCTCCCCAGAAGTGCCCAGGGTGTAAATGCAATAGCTTGTGTAAGTC CACTGGAACCCAGGCTCACCAAGTCAGTCTTAACCAACACGGCCCCAGCACCCGCAGAGCAGACACTGCGATGA CAACGGACGACAGAAGTGCCCGCTATGACTCTAGCACCGGGCCACGCCGCTCTGGAAACTCAAACGCTGAGCG CTGAGACCTCTTCTAGGGCCTCAACCCCAGCCGGCCCCATTCCAGAAGCAGAGACCAGGGGAGCCAAGAGAATTT CCCCTGCAAGAGAGCCAGGAGTTTCACAAAAACATCTCCCAACTTCATGGTGCTGATCGCCACCTCCGTGGAGA CATCAGCCGCCAGTGGCAGCCCCGAGGGAGCTGGAATGACCACAGTTCAGACCATCACAGGCAGTGATCCCGAGG AAGCCATCTTTGACACCCTTTGCACCGATGACAGCTCTGAAGAGGCAAAGACACTCACAATGGACATATTGACAT TGGCTCACACCTCCACAGAAGCTAAGGGCCTGTCCTCAGAGAGCAGTGCCTCTTCCGACGGCCCCCATCCAGTCA TCACCCCGTCACGGGCCTCAGAGAGCAGCGCCTCTTCCGACGGCCCCCATCCAGTCATCACCCCGTCACGGGCCT CAGAGAGCAGCGCCTCTTCCGACGGCCCCCATCCAGTCATCACCCCGTCACGGGCCTCAGAGAGCAGCGCCTCTT CCGACGGCCCCATCCAGTCATCACCCCGTCACGGGCCTCAGAGAGCAGTGCCTCTTCCGACGGCCCCCATCCAG TCATCACCCCGTCACGGGCCTCAGAGAGCAGCGCCCTCTTCCGACGGCCCCCATCCAGTCATCACCCCCTCATGGT CCCCGGGATCTGATGTCACTCTCCTCGCTGAAGCCCCTGGTGACTGTCACAAACATCGAGGTTATTAATTGCAGC ATCACAGAAATAGAAACAACAACTTCCAGCATCCCTGGGGCCTCAGACATAGATCTCATCCCCACGGAAGGGGTG AAGGCCTCGTCCACCTCCGATCCACCAGCTCTGCCTGACTCCACTGAAGCAAAACCACACATCACTGAGGTCACA GCCTCTGCCGAGACCCTGTCCACAGCCGGCACCACAGAGTCAGCTGCACCTCATGCCACGGTTGGGACCCCACTC CCCACTAACAGCGCCACAGAAAGAGAAGTGACAGCACCCGGGGCCCACGACCCTCAGTGGAGCTCTGGTCACAGTT AGCAGGAATCCCCTGGAAGAAACCTCAGCCCTCTCTGTTGAGACACCAAGTTACGTCAAAGTCTCAGGAGCAGCT CCGGTCTCCATAGAGGCTGGGTCAGCAGTGGGCAAAACAACTTCCTTTGCTGGGAGCTCTGCTTCCTACAGC CCCTCGGAAGCCGCCCTCAAGAACTTCACCCCTTCAGAGACACCGACCATGGACATCGCAACCAAGGGGCCCTTC GCCAAGATCACAACCTCAGCGAAGACCACGATGAAGCCCCATCTCTACTAAAAATACAAAAATTAGCTGGGTGTG GTGGCATGCACCTGTAGTCCCAGCTACTCGGGAGGTTGAGGCAGGAGAATCACTTGCACCAGGGAGGTGGAGGTT GCAGTGAGCCGAGATTGCGCCACTGCACTCCAGCCTGGGCAACAGAGCAAG

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1448/6881 FIGURE 1345

TGTCTTCAGTGAAATGATACCGGTCCCCACTGCCCAGCTCACCTCCCGGGGCTGCAGGAGGCACCGGAGATAATG GCTGTAGAGGGTCTTGTAACCTGAACATTGCTTGCAAACATAAGGAATTCTAGTTACTGGGAGGAAGCACAGGGC AGAGGCCAGAAGAGGCCCTCAGATTTGAGGCACCCTAGCCCAGACGGATAAGGATCCACCAGCTCTGGGGGCGTG GTGGCCAGCTTTGACCCTCATGGCCTCCTTTCTTCTGTCCCTTGACCTTCGGCTCCTCCCTGTCCACCCTGGCCT $\tt CCGAGTCTCCTCCACTTTTCCTTCCGTCTCAGCCCTCAGCTCTAGGCGCCCCTCCAGAGACCCAGCTGTCTTCCC$ TGGGCGGTGCCCTCCCCCCCACACAGCTGGGTGTGGGGCCGCTCAGCCACAGGCTGCATGCCTGTCGGTCTCTT TCTGGCACCCTCCTTGAGGCCAGCATCAGGCTTTGGGTTCATGTTTGGGGGTGTGCCCTGGACGGAGTGTGGGCC TCCAGCCAGGCTGCCCCACTGACAGTTTGGCAAAACCAGGACCTATCTGGAAGCCGAAGCCGGGGATCACCAGGT $\tt GGACCCAGCGGGGTGGGACTGAGTGAC\underline{\textbf{TGA}} \tt CCCTGGGGTGTTGGATTCCATCTGGCCCCCGGCTGCCTTCAAACA$ GGTGTTCAGTGGAAAGCGACTGGAGGCTGAGTTCCCACCTCATCACTCTCAGAGCACCTTCCGGAAGACCTCGCC GGTGTGGATGGGACTGGGGATGCGTCACAGTGTGGCTCATCCCAGAGTCCGTGCTCAGGATTTTTGGGGTTTTAT TTATTTATTTTTTTGAGATGGAGTCTCGCTCTGTCGCCCAGGCTGGAGTGCAGTAGGCACGATCTCGGCTTCC TGCAACCTCCACTTCCGGGTTCAAGCAATCCTCCTGCCTCAGCCTCCTGAGTAGCTGGGATTACAGGCATGCAC CACCACACTCAGTTAATTTTTGTATTTTTAGTAGAGACGGGGTTTCACCATGTTGGCCAGGCTGGTCTCGAACTC ATGCTCAGGTTTAACTAAGCACATTTATTATTTCAACTATAAAAATAATTTATTATAAAAGTTTGGAAAGTATTT

 ${\tt MRVRAGVCGVAGAGREGGAGLGGDSDLGWAVPSLSTQLGVGPLSHRLHACRSLSGTLLEASIRLWVHVWGCALDG} \\ {\tt VWASSQAAPLTVWQNQDLSGSRSRGSPGGPSGVGLSD} \\$

CATCCTCCCAGAGAAGGGGCCCGAATCGCCGAAGGGCACTGCTTCGCCGATTTAAAAAACAAAGCAAAAAGCCCC ${\tt CAGGGAGCGGCTGCGAGCGAATGGGATAAGCGAGCCTCCAGTTCCCCGTCTTCCAGAGCAAGTGGCTTCAGTGAT}$ ATCCAAGCGCCCTTCCAGCACCCATTCCCTGCCTCGCCAGCAGGCACCGGGGCCCCACTTGGCGTTTGCGGATTT CAGCTGAATGGGAGGCGACACAATGAGACAAGAGCAAACCGTTTCTCAGCGTTCTTGCCCAGGGCCTTCCCGTCT GCCTTCAGGAGGCCACCCGACATAGTGCAGAGAAGCGGACCACAATGCGGCGACTCCCGGCACGAGGCTGCGTCC GCGATGGCGGAAGCGGAAACGCGCGGAGGCGAGCATCTCATTGGACCCAATCCGAGGGCGGCAGTGTCGTCATCA AGCTGCGCGGGGCATAGACGTCCGGGTCGGGCCCCCGCGGGCGAAGACGAGGCGGCGAGGTCGGGTTCCGGG CGCTTGGAGAAGATGGTGCTGCGGCGGCTGCTGCCCCCTGCTGCACAGCCCGCAGCTGGTAACGTCTGTCA GAGTCGCGGCCTATCCGACGTGCGGCGCAGCTCACGGCCTTCGCACTGCTGCAGGCCCAGCTGCGGGGCCAGGAC GCGGCCCGCCGCCTGCAGGACCTCGCGGCTGGGCCCGTGGGCTCCCTGTGCCGCCGCGCTGAGCGATTTAGAGAC GCCTTCACCCAGGAGCTACGCCGCGGCCTCCGAGGCCGCCTCGGGGCCACCACCAGGTAGCCAGAGGGGCCCTGGC ${\tt TAAGAGCCTAGGCCAGACCGCCCGCTCCGTTGAAGTCTTGTGATTGGACAAGACACAGTGTGGAGAAAGACCCCT}$ AAGCCTAACAGAGATGAAGGTAGGCTGGGTCCAGACACGGCACCTACGGAGAGCCACGGACCGAAGCCAGAGAGC $\tt CTTTCCTCTGCAAGTGGGACTGAAACTCTTGACAGATGCTGCTCAATCTGACTGGTATAGCAGGACAGTTAATTC$ CAGGGACGATATGGATGAAAAGACAACCCTACAGCTGCCAAATTCCTTTGATTAAATGTGTGAGCTGGTTGATAG GCATGAGTGTGATACTTCTCAGGCAAGATGTGTTAAGAATACCGGGGACTGTAGGCCTATGGTAATAATAAACAC GTATTTTATGAAATGA

PCT/US2003/028547

1451/6881 FIGURE 1348

 $\texttt{CCGGCTGCTGCGGACCTCGGACCCGGACCCAGCCCGGCCCCAGCCCGACGCCCGACGGCCCC} \underline{\textbf{ATC}} \texttt{CGG}$ GGTCCGAGCGGGGCTCTGTGGCTGCTCCTGGCTCTGCGCACCGTGCTCGGTGGCATGGAGGTGCGGTGCGCCC CTCTGCGTCCGGGGCACCTCCGCCGACCACTGCGTCCAGCTCATCGCGGCCCAGGAGGCTGACGCCATCACTCTG GATGGAGGAGCCATCTATGAGGCGGGAAAGGAGCACGGCCTGAAGCCGGTGGTGGGCGAAGTGTACGATCAAGAG GTCGGTACCTCCTATTACGCCGTGGCTGTGGTCAGGAGGAGCTCCCATGTGACCATTGACACCCTGAAAGGCGTG AAGTCCTGCCACACGGGCATCAATCGCACAGTGGGCTGGAACGTGCCCGTGGGCTACCTGGTGGAGAGCGGCCGC $\tt CTCTCGGTGATGGGCTGCGATGTACTCAAAGCTGTCAGCGACTATTTTGGGGGCAGCTGCGTCCCGGGGGCAGGA$ GAGACCAGTTACTCTGAGTCCCTCTGTCGCCTCTGCAGGGGTGACAGCTCTGGGGAAGGGGTGTGACAAGAGC ${\tt CCCTGGAGAGATACTACGACTACAGCGGGGCCTTCCGGTGCCTGGCGGAAGGGGCAGGGGACGTGGCTTTTGTG}$ AAGCACAGCACGGTACTGGAGAACACGGATGAAAGTCCATCACGAAGGCAAACATGGACCAGATCTGAGGAGGAA GAAGGCGAGTGCCCTGCACACGAGGAAGCACGTAGGACGATGCGCTCTAGTGCTGGGCAAGCCTGGAAATGGGCT ${\tt CCCGTTCACAGGCCCCAGGACGAGTCTGACAAAGGAGAATTTGGAAAACGGGCAAAGAGTAGGGATATGTTGGGT}$ $\underline{\textbf{TAA}} \texttt{GAATCAGCTCTTTCAAACTTGGGGTTTTTTTTGGGATGGGGGTCTCACCATGTTGCCCAGGCTGGTCTCAAA}$ $\tt CCCCCAGCCTCAACTGATCCTCGCATCTCAGCCTCCTGAGTAGCTGGGATGACAGGCGTGCACCTGGCAGCTTTT$ ${\tt TCAAAGTGTTGATGGTAATCTGAGGCAATCTAAGGGAGTCATTTTTTAAGTGACTTTATACAGAAAGATTGGTAA}$ GAGCCAAGGGGTAGAAGTGGCATAAATGTCTAAAGCAGGGAAGTGACAGGACTTTCATTGTTCTTGGCTGAGGAG AAGCGGGAGTGGCTGATGGAAGCACCTAAATGATGCCTTTGTCTGTGGGAAGGCAAATGATGCCCCAGAGCTCTA ACCAAAGGTTTTGCAGCCGCCGAAAAACAGGAAAGTTGGGAAGCGGGGGTAGGACTACACTGAATCATTAACAGT GCTGTAAACTACCATGTGGCCATTAACAATGACCTTTAGGGAGTTTTCCTAAACGATCACTCTGGTGCGGGTGTT

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GRLSVMGCDVLKAVSDYFGGSCVPGAGETSYSESLCRLCRGDSSGEGVCDKSPLERYYDYSGAFRCLAEGAGDVA
FVKHSTVLENTDESPSRRQTWTRSEEEEGECPAHEEARRTMRSSAGQAWKWAPVHRPQDESDKGEFGKRAKSRDM
LG

 ${\tt MVLRRLLAALLHSPQLVERLSESRPIRRAAQLTAFALLQAQLRGQDAARRLQDLAAGPVGSLCRRAERFRDAFTQELRRGLRGRSGPPPGSQRGPGANI$

MVMLLLLLSALAGLFGAAEGQAFHLGKCPNPPVQENFDVNKYLGRWYEIEKIPTTFENGRCIQANYSLMENGKIK VLNQELRADGTVNQIEGEATPVNLTEPAKLEVKFSWFMPSAPYWILATDYENYALVYSCTCIIQLFHVDFAWILA RNPNLPPETVDSLKNILTSNNIDVKKMTVTDQVNCPKLS

 ${\tt GCGCGAGTGGGAGGCCTGCGACTCCGGCCTTGTCCGCGCCCGCTCTCGGCGCGACGTCTCCAGCC} \underline{{\tt ATG}}$

AACCGGTTTGGTACCCGGTTGGTGGGAGCCACGGCGACTTCTTCGCCGCCGCCGAAGGCCCGCAGCAATGAAAAC AGACTAAATAGAAGACTCCTCCAGCAAAGTGGTGCCCAGCAATTCAGGATGAGAGTGCGATGGGGAATCCAACAG AATTCTGGTTTTGGTAAGACTAGTCTGAATCATAGAGGAAGAGTAATGCCTGGAAAGAGACGTCCTAATGGAGTT ATCACTGGCCTTGCAGCTAGGAAAACGACTGGAATTCGAAAAGGAATTAGTCCTATGAATCGTCCACCTCTAAGT AAACCAGTAGCAGTTCTCAAGAGACCTAGCCAGCTAAGCAGAAAAAATAACATTCCAGCTAATTTTACCAGGAGT GGAAATAAATTAAATCATCAGAAAGATACTCGTCAGGCAACTTTTCTTTTCAGAAGAGGCCTGAAGGTGCAGGCC CAGTTGAATACAGAACAACTGCTAGACGATGTAGTAGCAAAGAGAACTCGTCAATGGCGGACTTCCACCACAAAT GGAGGGATTTTGACTGTATCTATTGACAATCCTGGAGCAGTGCAATGCCCAGTAACTCAGAAACCACGATTAACT CGTACTGCTGTACCTTCATTTTTAACAAAGCGGGAGCAAAGTGACGTCAAGAAAGTTCCTAAAGGTGTTCCCCTG CAGTTTGACATAAACAGTGTCGGAAAACAGACAGGGATGACGTTGAATGAGCGGTTTGGGATCCTGAAGGAACAA AGAGCCACTCTCACATACAACAAAGGGGGAAGCCGCTTTGTCACCGTGGGA<u>TAG</u>GTCCCATGTCAAAGGAACTTT TGAGTGATGACTCTGAGAAGTTGAATTGCTTGAAGAGTTCATCACGGAAATTCAAGAAACTTTACTTCAAAATAT ATTCAGGATCTCATCACCTTTGCCCGTGTTTTAGACTTTGTCATGGTAAATCCTGGTCTTCATAAACATGAGTAG GTCCCTTGGTTGCTGTCACTTGCCCTTTAATAGTGTTGATGTAGTCAGTGCCGTTGCCTTTTCTTCATTAGAGAC ACAGAACAATGTATTAGAATTTCCAGCTGTGGGTTTGAAGACTTAGGGGGACATCCAGAACGTGCTTCCTCTTTC AGACGGTGTAAAGTCCCCTGGAATTACACAGCTTTAGTGCTGAGCTTTTAACAGGAAATGTGGCCCTAGGTATTA GTCTTAGTTTAAAATGTTGGTGTTTAGAGACTGTAAATGCATATTCACAAAGTTATCTGATAGGGCCTTGGAGGA GGACAGGTAGTTGAGATGAAACACTTCAAAACCCTGGTTATAGATGTACTGTTTGGATGTAGCATAGTCTTGAGT CTAGCGTCCACAAAGAATTATTCAAATGATATTTAGAAGAATTATAACTATTACATTGAATGGAGTCCCTTGGAT ATTTTGATAGTAAAATTAATAGCCATAAAGTCCTAGACTTCTTATTTGAAGTTAAAATTTCTTATTTGAAAAGTT GAAATTTATGAGCTTTGAAGATTGCTAAATTAAATAATTTATAGCTCCAAAAAACAAAAATATACTTGTATATGTC ACAGAGAAAAAAATGCAAAATTTATAATAGAGTTACATTAACCTTGTTGTTTACCTTTCACTGATTTCTTATAT GGTATAAATTAAAGTTCAGGCATTTATGGGGAGAAAAGGCCCTCCCCACCGACCCGCCACCTGCCACCTCTGACG GAGTGGGAGAAGTTAGTCTGTGCTAAGATAGTACTGAGTCCCCAGATGTTGTATACTGTAAATTACAGTATAATG CCAAATGCAGCAAAATCTTCCAGCTGTACGTTACAAGTTTGGTCATTTTGAAGCTTGACATTTTAGTTTGCCATT ATGTTAAAAACATCTAAATAGGTGTTAGTTTCTCAGGAGTAGATTGTTAGTGTTGACTTTTCCTGTAAAGCAGAC ATCGTTCTTGGCCTGCCTGCATTGTATACTAGATTTCATTGTTGTCTCTCATGCTTCTTGAGTTGCTTCATGGT TTATGCTCGCCATGGAAAGCTATCAGTAACAGTTTCATGCTTATACCAAAGAATTAAATCTGATCTTTAATATCT CTCCTTAGCTATTTGATGCTTTTCATATAGGCCAAGAACTCATTGCAAAACATTTTTGCAAGGATGAATGCCTGT ATTTGGTCTAGGAACAGTACATTTTAGTCTGATTTAGAATTACTGGTAGCTTATTTTAAAGCAAGGAAAAGCAGC TGAGCTCAAGTTTGCTGTCTTTAGAATGGTTTGTGAAAATATGGTATAAAGGTGTTTTCATTTTCCTGTTCTTAC CTATTATTGTATAGAGCTATTCATGCCATTTTTTGGGAAAACTTTAAAAATTGCCCCAAATACTGACATTGAGTG CATTAAATAACAAATTATCTTTGATACATTAAACTTTTATTCTTCATGCATCTGTAATTTAATTTTAAGTATAAT GTTTTGCCTTTGGTACAACTAAATTAAAACTCTTGGTGGTCACATATTGTATATAAACAAAACAATATGCTTTGT TGAAGGAAAATTTTCTTTATTGGAATGTGGTTGTAATCCTTGTTCAGTTCTTAAGTTTCGGTTTTTTTAAAAAC AGGATGCAACTTAAACTTTTCTTTGCATCAAGGTATATGCAAAACATTGGTGCCGTGCATCACCAAATGAAAGTT TGTATTTAACGAGGAGGTGCTTTACACTGTACTTTTTGGTGTTTTTTTGGAAAAGTTACATTTAGATCTATTCTGA AAA

MNRFGTRLVGATATSSPPPKARSNENLDKIDMSLDDIIKLNRKEGKKQNFPRLNRRLLQQSGAQQFRMRVRWGIQ QNSGFGKTSLNHRGRVMPGKRRPNGVITGLAARKTTGIRKGISPMNRPPLSDKNIEQYFPVLKRKANLLRQNEGQ RKPVAVLKRPSQLSRKNNIPANFTRSGNKLNHQKDTRQATFLFRRGLKVQAQLNTEQLLDDVVAKRTRQWRTSTT NGGILTVSIDNPGAVQCPVTQKPRLTRTAVPSFLTKREQSDVKKVPKGVPLQFDINSVGKQTGMTLNERFGILKE QRATLTYNKGGSRFVTVG

AATCAAGAGGTTCCAATCTTCGTGTTCACTTTAAGAACACTCGTGGAACTGCTCAGGCCACCAAGGGTATGCATA
TACGAAAAGCCACGAAGTATCTGAAAGATG
TACGAAAAGCCACGAAGTATCTGAAAGATG
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AACCCATACATGAGCTCTCCCTGCCACATTGAGATGATCCTTATGGAAAAGGAACAGATTGTTCCTAAACCAGAA
GAGGAGGTTGCCCAGAAGAAAAAGATATCCCAGAAGAAACTGAAGAAACAAAAACTTACGGCACGGGAGTAAATT
CAGCATTAAAATAAATGTAATTAAAAGG

 ${\tt MSLYRNSAYHSDVTMVELASVRRPSSGAGHKVGGPKRVLNSLVIEYIQVNKAPKMLRRTYRAHGRINSYMSSPWHIEMILTEKEQIVPKPEKEVAQKKKISQKKLKKQKLMARK$

 ${\tt MQIFVKTLTGKTITLEVEPSDTIENVKAKIQGKEGIPPDQQRLIFAGKQLEDGRTLSDYNIQKESTLHLVLRLLV}\\ {\tt VLRKGRRSLTPLPRRISTRERRLSWLS}$

CCCGCCGCTAATGTTTTGGCCGCTTCAAGATGGCGGTGCAGGAGTCGGCGGCTCAGTTGTCCATGACCCTGAAG GTCCAGGAGTACCCGACCCTCAAGGTGCCCTACGAGACGCTGAACAACGCTTTCGCGCCGCTCAGAAGAACATT GACCGGGAGACCAGCCACGTCACCATGGTGGTGGCCGAGCTGGAGAAGACGTTGAGCGGCTGCCCCGCCGTGGAC GCCGAGGACGAGGCGCCAAGCTGTGCAAGCGCCGGATCGAGCACCTCAAAGAGCATAGCAGCGACCAGCCGCG GCGGCCAGCGTGTGGAAGAGGAAGCGCATGGATCGCATGATGGTGGAGCACCTGCTGCGTTGCGGCTACTACAAC ACGGCTGTCAAGCTGGCGCCCCAGAGCGGCATCGAGGACCTAGTGAATATTGAGATGTTCCTGACGGCCAAAGAG AAGATGAAGAGCTGCCTGGAGTTCAGCCTCAGAATCCAGGAGTTCATTGAACTCATCCGGCAGAATAAGAGACTG GACGCTGTGAGACATGCAAGAAAGCACTTCAGCCAAGCAGAAGGGAGCCAGCTGGACGAGGTGCGCCAGGCCATG GGCATGCTGGCCTTCCCGCCGACACGCACATCTCCCCGTACAAGGACCTTCTGGACCCTGCACGGTGGCGGATG CTGATCCAGCAGTTCCGGTACGACAACTACCGACTACACCAGCTGGGAAACAATTCTGTGTTCACCCTCACCCTG CAGGCTGGCCTCTCAGCCATCAAGACACCACAGTGCTACAAGGAGGACGGCAGCTCCAAGAGCCCTGACTGCCCT GTGTGCAGCCGCTCCCTGAACAAGCTGGCGCAGCCCCTGCCCATGGCCCACTGTGCCAACTCCCGCCTGGTCTGC AAGATTTCTGGCGACGTGATGAACGAGAACAATCCGCCCATGATGCTGCCCAACGGCTACGTCTACGGCTACAAT TCTCTGCTTTCTATCCGTCAAGATGATAAAGTCGTGTGCCCGAGAACCAAAGAAGTCTTCCACTTCTCACAAGCC GAGAAGGTGTACATCATGTAGGCCCCACGTCGTGAAGCGCACGCCTCGGGGACGGGCTGCAGTGGGCGGGAGGC CACGCCTTCCTCCTGTCCCACGCTCCAGCCTGCCGCGCGTTTCTGTTTCTTGCGACCAAAGATCCGTGAGCAAC GATAAATACTCTTAGGAAGAGAAAATAAGGTTTCATAAGTTTGTACTTGAAAACATTTGGATTGGTAGGATTT TGTAACACGTCAACCATTTGATGCTTCTGAAAAGTACTTTCAACTTGCGAAGGAAACTCTTCTTTAAAGACTGAC TTCTGTGAACGATGAGACTTGGAGAACGGGCTGGTCCTTCACCACTTCCTGTTGGCCCTGGCCTGGCCGGGGAAG GTGGCAGCGGCACCGGACTGACCTGCAGTGACCCGCGATGCCGCCACGAGGGACACTTATGGCTTCATTCGAG GTCCGCGGGACTGTGTTCGTACGTGCATAGTTTCGATATCACATCGCGGGGCTGTGTTCGTAGCTGCGTCGTTTC GATATCACACCCTCTGTGTGCCGCCTTACTTCCTGCTTCGAGAATGTATAACGTGGAAATCCACGGGACCAAATT TCTGCAGAGGCCTTGCCGGATGGTTCCATAACTGTAGAGTCTAATTGCTATCCATTACAGAAATTAATCGTTCAG TTGAAAGAAGTACTGATGACTTTTCAAAACAAATGAACCACCGTAGCTGACAGAGAACCGTATCGTAGAGGTTTG TAGTTAGTGCTTATTTTTGCATGTTGATGTTGACTAGCTAATAAACTGTAAATGTAAACCATGCGAATAAAATGG TTTTCTATTTCTC

CCCCAGGTCCGGACAGGCCGAGATGACGCCGAGCCCCTGTTGCTGCTGCTGCTGCCGCCGCTGCTGGGGGGC GGGCCGCACTGTGCGGCTGCAGTGCCCAGTGGAGGGGGACCCGCCGCCGCTGACCATGTGGACCAAGGATGGCCG CACCATCCACAGCGGCTGGAGCCGCTTCCGCGTGCTGCCGCAGGGGCTGAAGGTGAAGCAGGTGGAGCGGAGGA TGCCGGCGTGTACGTGTGCAAGGCCACCAACGGCTTCGGCAGCCTGAGCGTCAACTACACCCTCGTCGTGCTGGA GTGGGCACGACCGCGCTTCACACACCCCTCCAAGATGAGGCGCCGGGTGATCGCACGGCCCGTGGGTAGCTCCGT GCGGCTCAAGTGCGTGGCCAGCGGGCACCCTCGGCCCGACATCACGTGGATGAAGGACGACCAGGCCTTGACGCG CCCAGAGGCCGCTGAGCCCAGGAAGAAGAGTGGACACTGAGCCTGAAGAACCTGCGGCCGGAGGACAGCGGCAA ATACACCTGCCGCGTGTCGAACCGCGGGGCGCCATCAACGCCACCTACAAGGTGGATGTGATCCAGCGGACCCG TTCCAAGCCCGTGCTCACAGGCACGCACCCCGTGAACACGACGGTGGACTTCGGGGGGGACCACGTCCTTCCAGTG ${\tt CAAGGTGCGCAGCGACGTGAAGCCGGTGATCCAGTGGCTGAAGCGCGTGGAGTACGCGCCGAGGGCCGCCACAAC}$ TCCACCATCGATGTGGGCGGCCAGAAGTTTGTGGTGCTGCCCACGGGTGACGTGTGGTCGCGGCCCGACGGCTCC TACCTCAATAAGCTGCTCATCACCCGTGCCCGCCAGGACGATGCGGGCATGTACATCTGCCTTGGCGCCAACACC ATGGGCTACAGCTTCCGCAGCGCCTTCCTCACCGTGCTGCCAGACCCAAAACCGCCAGGGCCACCTGTGGCCTCC $\tt GTGGGGCTGTGTGAGGAGCATGGGTCTCCGGCAGCCCCCAGCACTTACTGGGCCCAGGCCCAGTTGCTGGCCCT$ GACAGGCAGACTGGGAGGATGGAGGACGGAGCTGCAGACGAAGGCAGGGGACCCATGGCGAGGAGGAATGGCCAG CTGGGCACACAGATAAGCTGCCCAAATGCACGCACACGCACAGAGACATGCCAGAACATACAAGGACATGCTGCC GCACACGTGCAGATATGGTATCCGGACACACGTGCACAGATATGCTGCCTGGACACACAGATAATGCTGCC ACACACATGCAGATATGCTGCCTGGACACACACTTCCAGACACACGTGCACAGGCGCAGATATGCTGCCTGGACA CGTGCAGATATTGCCTGGACACACACATGTGCACAGATATGCTGTCTGGACATGCACACACGTGCAGATATGCTG TGCAGATATGCTGCCTGGACACACGCAGACTGACGTGCTTTTGGGAGGGTGTGCCGTGAAGCCTGCAGTACGTGT GCCGTGAGGCTCATAGTTGATGAGGGACTTTCCCTGCTCCACCGTCACTCCCCCAACTCTGCCCGCCTCTGTCCC $\tt CGCCTCAGTCCCCGCCTCCATCCCCGCCTCTGTCCCCTGGCCTTGGCGGCTATTTTTGCCACCTGCCTTGGGTGC$ CCAGGAGTCCCCTACTGCTGTGGGCTTGGGGGTTGGGGGCACAGCCCCAAGCCTGAGAGGCTGGAGCCCATGGC TAGTGGCTCATCCCCACTGCATTCTCCCCCTGACACAGAGAGGGGCCTTGGTATTTATATTTAAGAAATGAAGA TAATATTAATAATGATGGAAGGAAGACTGGGTTGCAGGGACTGTGGTCTCCTCGGGGCCCGGGACCCGCCTGGT CCTTTCCCTCC

MVPPVQVSPLIKLGRYSALFLGVAYGATRYNYLKPRAEEERRIAAEEKKKQDELKRIARELAEDDSILK

FIGURE 1368

 $\label{thm:local_mass} Masrktkkeggalraqrassnvfsnfeqtqiqefkeaftlmdqnrdgfidkedlkdtyaslgktnvkddeldam \\ Lkeasgpinftmflnlfgeklsgtdaeetilnafkmldpdgkgkinkeyikrllmsqadkmtaeevdqmfqfasi \\ DVAGNLDYKALSYVITHGEEKEE$

WO 2004/030615 PCT/US2003/028547

1473/6881 FIGURE 1370

CGGGGCCGACGGAGGCCGAGACGGGGTTGGCCGAGCCCGGGCCCTGTGCGCGCAGCGGGGCCACCGCACCTACG CGCGCCGCTGGGTGTTCCTGCTCGCGATCAGCCTGCTCAACTGCTCCAACGCCACGATCAACTGGCTGTCACTGG TCTACCTCGTGGTATCCACCCCATTTGGCGTGGCGGCCATCTGGATCCTGGACTCCGTCGGGCTCCGTGCGGCGC TCGGTGTCTATACCATCCCTGCTGGCGTCGTCTGCCTGTCCACCATCTGCCTGTGGGAGAGTGTGCCCCCCA CCCCGCCTCTGCCGGGGCTGCCAGCTCCACCTCAGAGAAGTTCCTGGATGGGCTCAAGCCGCAGCTCATGTGGA ACAAGGCCTATGTCATCCTGGCTGTGCTTGGGGGGGAATGATCGGGGATCTCTGCCAGCTTCTCAGCCCTCCTGG AGCAGATCCTCTGTGCAAGCGGCCACTCCAGTGGGTTTTCCGGCCTCTGTGGCGCTCTCTTCATCACGTTTGGGA TCCTGGGGGCACTGGCTCTCGGCCCCTATGTGGACCGGACCAAGCACTTCACTGAGGCCACCAAGATTGGCCTGT TGACGGCACTGACTGTGCGACGCTCGGAGCTGTCCTTGTCCACCTGCCAGCAGGGGGAGGATCCACTTGACTGGA CAGTGTCTCTGCTGCTGATGGCCGGCCTGTGCACCTTCTTCAGCTGCATCCTGGCGGTCTTCTTCCACACCCCAT GTGTGGACCGAGGGGGAGCAGGAAGGGCTGGGGTCCTGGGGCCCAGCACGCGACTCCGGAGTGCACGGCGAGGG GCCCAGCAGCCACCGACGCCCCCCCCCCCCGGCAGACTCGCAGGGTCCAAGCGTCCAGGTTTATTGACC $\texttt{CGGCTGGGTCTCACTCCTCCTCCCCGTGGGTGATCACG} \underline{\textbf{TAG}} \texttt{CTGAGCGCCTTGTAGTCCAGGTTGCCCG}$

MAGPTEAETGLAEPRALCAQRGHRTYARRWVFLLAISLLNCSNATINWLSLVYLVVSTPFGVAAIWILDSVGLRA ALGVYTIPAGVVCLLSTICLWESVPPTPPSAGAASSTSEKFLDGLKPQLMWNKAYVILAVCLGGMIGISASFSAL LEQILCASGHSSGFSGLCGALFITFGILGALALGPYVDRTKHFTEATKIGLCLFSLACVPFALVSQLQGQTLALA ATCSLLGLFGFSVGPVAMELAVECSFPVGEGAATGMIFVLGQAEGILIMLAMTALTVRRSELSLSTCQQGEDPLD WTVSLLLMAGLCTFFSCILAVFFHTPYRRLQAESGEPPSTRNAVGGADSGPGVDRGGAGRAGVLGPSTATPECTA RGASLEDPRGPGSPHPACHRATPRAQGPAATDAPSRPGRLAGRVQASRFIDPAGSHSSFSSPWVIT

(

GGCACGAGGGGTTCCGTTTCCGGAGTGGAGGGCACGCCAGGGTGTCTGAAGCTGAGACCCCGGGCTCGCAGTCGC CGCGATGGACAGCCCGAGGTGACCTTCACTCTCGCCTATCTGGTGTTCGCCGTGTGCTTCGTGTTCACGCCCAA GCCCTTCCACTTGCGCCGCACGGCCGCCACGCTGTTGTGCCACTCGCTGCTGCCGCTCGGCTACTACGTGGGCAT GTGCCTTGCGGCTTCAGAAAAGCGGCTCCACGCCCTCAGCCAGGCCCCTGAGGCCTGGCGGCTCTTCCTGCTGCT AACCACCTACCGAGTGCACGTGGCCCAGCAGCAGGACGTGCACCTGACTGTGACGGAGTCTCGGCAGCATGAGCT $\tt CTCGCCAGACTCGCACTTGCCCGTGCAGCTCCTCACCATCCGTGTGGCCAGCACCAACCCTGCTGTGCAGGCCTT$ $\tt TGACATCTGGAGCTGGAGGCCTGCA\underline{TAG}GCTGCATGCAGACACGTGCCAGCGTGAAGCTGGTGAAGACCTGCCAG$ GAGGCAGCCACAGGCGAGTGCCAGCAGTGTTACTGCCGCCCCATGTGGTGCCTCACCTGCATGGGCAAGTGGTTC TTCTGCATCCTGGATGTGTGCACCGTGCGCTGAGTGGGCTGAGGTGACTCTGTGTCTCCCCGCAAAG ACTCGCCTCTGCCCTGGGTCTGCAGAAGGCTGAGGACTTTTGGTTAAAAGCAATCCTCATGAAAACACCCCACCC TGCTTGGCAGCCAGGGTACAAGTCCTGGGCACCTCCTCTTTGCCTCCTCCTGCCCCTTTCCTGCTGGTGGGGGC AGATCCTGCACACACAGACACAGCGTCTGCCCCCGAGCCATTCCCTGGAGACCCTGGGTCTACCCCAGGTGGTCG CTGCCCTGTCCTGGAGCTGGCCCCTGGCTGCCTGGAGGACCCTGGGTAGGTCCTGAGGGTGGGATGGAAGAAGAGG GTGGCAATGGGAGGACAGGTCAGAGCGCCCTCATTTGTGGGGCTGCCCCTCCGGGTTTCTCATCCTGTCCTTGGT GCCTTTTTCTGCCCAACAAGTCCAGGGAAGGCCGAGGTCTCAGACTCCTGGGTAGGGGTGGGGGTTTGAGTTGAG GACCAAAGTGCCATAGCGACATCCAGAACACAAGCCCACCAGGGGTCCAGCCCAGGCTACCCACTCCCCTAGGGT $\tt CTCCCAGGCTCAGAAGGGGATGCACGCCCCCTGTGGTCAAGCCTCTGGTGGGCGTCTTGCCCAGTTCCTGATGGT$ TCAAGGGGAGGGGGATGTTGGCCAGGCCCCAGGCCACAGCCCTGACACAGGTGTGGCTACTGGAGGGGCCTTCA TACCTGCGGCCCCAAAGCCCCTGGGCTTGGCTGTTTGAGGCAGAGGTGATGGACTCCGGGGGCCTGACACTTGGG ATTTGGGAGGCTTCCTAGAGCGCTCAGCAGGTGAAGGCAGCAGGGGCCATGGCCGGGAGCCAGGCCTAGCTTTGA ACTGAGTTTCAAGGGCTGCCAAAGAGGGGCAGTGGGTTGGGGTTGTTTTTACTACAAAATAAGTTACTTAGTTTT AAAAAA

 $\label{thm:constraint} $$\operatorname{MDSPEVTFTLAYLVFAVCFVFTPNEFHAAGLTVQNLLSGWLGSEDAAFVPFHLRRTAATLLCHSLLPLGYYVGMC}$$ LAASEKRLHALSQAPEAWRLFLLLAVTLPSIACILIYYWSRDRWACHPLARTLALYALPQSGWQAVASSVNTEFR $$\operatorname{RIDKFATGAPGARVIVTDTWVMKVTTYRVHVAQQQDVHLTVTESRQHELSPDSNLPVQLLTIRVASTNPAVQAFD}$$ IWSWRPA$

FIGURE 1374

 ${\tt GGCTCAGAGCCCGGCAACGGGCGGGCGGGCAGA} {\color{red} {\bf ATC} {\bf ATC$ AAAAATACAGAAAATTGCGACTTCCTGTTTTCGCCACCAGAAGTTACCGGAAGATCGTCTGTTCTTCGTGTGTCA CAGAAAGAAATGTGCCACCCAAGAACCTGGCCAAAGCTATGAAGGTGACTTTTCAGACACCTCTGCGGGATCCA CAGACGCACAGGATTCTAAGTCCTAGCATGGCCAGCAAACTTGAGGCTCCTTTCACTCAGGATGACACCCTTGGA CTGGAAAACTCACACCCGGTCTGGACACAGAAAGAGAACCAACAGCTCATCAAGGAAGTGGATGCCAAAACTACT CATGGAATTCTACAGAAACCAGTGGAGGCTGACACCGACCTCCTGGGGGATGCAAGCCCAGCCTTTGGGAGTGGC AGCTCCAGCGAGTCTGGCCCAGGTGCCCTGGCTGACCTGGACTCCTCAAGCTCTTCCCAGAGCCCAGGAAGTTCT GAGAACCAAATGGTGTCTCCAGGAAAAGTGTCTGGCAGCCCTGAGCAAGCCGTGGAGGAAAACCTTAGTTCCTAT TCCTTAGACAGAAGAGTGACACCCGCCTCTGAGACCCTAGAAGACCCTTGCAGGACAGAGTCCCAGCACAAAGCG GAGACTCCGCACGGAGCCGAGGAAGAATGCAAAGCGGAGACTCCGCACGGAGCCGAGGAGGAATGCCGGCACGGT GGGGTCTGTGCTCCCGCAGCAGTGGCCACTTCGCCTCCTGGTGCAATCCCTAAGGAAGCCTGCGGAGGAGCACCC CTGCAGGGTCTGCCTGGCGAAGCCCTGGGCTGCCGGGTGTGGGCACCCCCGTGCCAGCAGATGGCACTCAG ACCCTGAGTCCTCAGGAAGAAGTGGCTGCAGGCCAAATGGCCAGCTCCTCGAGGAGCGGACCTGTAAAACTAGAA TTTGATGTATCTGATGGCGCCACCAGCAAAAGGGCACCCCCACCAAGGAGACTGGGAGAGAGGTCCGGCCTCAAG CCTCCCTTGAGGAAAGCAGCAGTGAGGCAGCAAAAGGCCCCGCAGGAGGTGGAGGAGGACGACGGTAGGAGCGGA GCAGGAGAGGACCCCCCATGCCAGCTTCTCGGGGCTCTTACCACCTCGACTGGGACAAAATGGATGACCCAAAC TTCATCCCGTTCGGAGGTGACACCAAGTCTGGTTGCAGTGAGGCCCAGCCCCCAGAAAGCCCTGAGACCAGGCTG GGCCAGCCAGCGGCTGAACAGTTGCATGCTGGGCCTGCCACGGAGGAGCCAGGTCCCTGTCTGAGCCAGCAGCTG CATTCAGCCTCAGCGGAGGACACGCCTGTGGTGCAGTTGGCAGCCGAGACCCCAACAGCAGAGAGCAAGGAGAGA ${\tt CAGCCTGCCTTGGAGCTGAAAGAGGAGGAGCTTCAGAGACCCCGCTGAGGTTCTAGGCACGGGCGCGGAGGTGGAT}$ TACCTGGAGCAGTTTGGAACTTCCTCGTTTAAGGAGTCGGCCTTGAGGAAGCAGTCCTTATACCTCAAGTTCGAC ACTCCCTCAGGACGTCCGCGGGAAGCCAAGCTTGTGGAGTTCGATTTCTTGGGAGCACTGGACATTCCTGTGCCA GGCCCACCCCAGGTGTTCCCGCGCCTGGGGGCCCACCCCTGTCCACCGGACCTATAGTGGACCTGCTCCAGTAC GTTCAGAAGCAGAAGGAACTTTCCAAAGCTGAAATCCAGAAAGTTCTAAAAGAAAAAGACCAACTTACCACAGAT CTGAACTCCATGGAGAAGTCCTTCTCCGACCTCTTCAAGCGTTTTGAGAAACAGAAAGAGGTGATCGAGGGCTAC CGCAAGAACGAAGAGTCACTGAAGAAGTGCGTGGAGGATTACCTGGCAAGGATCACCCAGGAGGGCCAGAGGTAC CAAGCCCTGAAGGCCCACGCGGAGGAGAAGCTGCAGCTGGCAAACGAGGAGATCGCCCAGGTCCGGAGCAAGGCC GAGCAGAAGACTAAAGAGAACGAGGAGCTGACCAGGATCTGCGACGACCTCATCTCCAAGATGGAGAAGATC<u>TGA</u>

FIGURE 1375

MSLQVLNDKNVSNEKNTENCDFLFSPPEVTGRSSVLRVSQKENVPPKNLAKAMKVTFQTPLRDPQTHRILSPSMA SKLEAPFTQDDTLGLENSHPVWTQKENQQLIKEVDAKTTHGILQKPVEADTDLLGDASPAFGSGSSSESGPGALA DLDCSSSSQSPGSSENQMVSPGKVSGSPEQAVEENLSSYSLDRRVTPASETLEDPCRTESQHKAETPHGAEEECK AETPHGAEEECRHGGVCAPAAVATSPPGAIPKEACGGAPLQGLPGEALGCPAGVGTPVPADGTQTLTCAHTSAPE STAPTNHLVAGRAMTLSPQEEVAAGQMASSSRSGPVKLEFDVSDGATSKRAPPPRRLGERSGLKPPLRKAAVRQQ KAPQEVEEDDGRSGAGEDPPMPASRGSYHLDWDKMDDPNFIPFGGDTKSGCSEAQPPESPETRLGQPAAEQLHAG PATEEPGPCLSQQLHSASAEDTPVVQLAAETPTAESKERALNSASTSLPTSCPGSEPVPTHQQGQPALELKEESF RDPAEVLGTGAEVDYLEQFGTSSFKESALRKQSLYLKFDPLLRDSPGRPVPVATETSSMHGANETPSGRPREAKL VEFDFLGALDIPVPGPPPGVPAPGGPPLSTGPIVDLLQYSQKDLDAVVKATQEENRELRSRCEELHGKNLELGKI MDRFEEVVYQAMEEVQKQKELSKAEIQKVLKEKDQLTTDLNSMEKSFSDLFKRFEKQKEVIEGYRKNEESLKKCV EDYLARITQEGQRYQALKAHAEEKLQLANEEIAQVRSKAQAEALALQASLRKEQMRIQSLEKTVEQKTKENEELT RICDDLISKMEKI

FIGURE 1376A

TGGTCTTGAACTCCTGACCTTGTGATCCGCTCGCCTCAGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACC GTGCCTGTCCTAGAACCACTGGTAACTCTTAACTGAGACAAGATTTCGCCATGTTGCCCAGGCTGGTCTCGAACT TCTGAGCTCAAGCGATCTACCTGCCTCGTCCTCCCAAAGTGTTGGAATTGCAGGTGTGAGCCACTGCACCCGGCC $\tt CTTGCCTCATGTTTGAATGATAATTTACCTGGGCATAAAATTCTGGACACTTGTGGTGGCACGAGCTGTCTGCTT$ TTCTGTGGAGACTGCGGGTTGCAGACACCAGCAGCCCCTATTGCTGCACGTCAGGTGTCCTCCACCTCAGTACT GTGGACATCTCGGGCCGCATAGCCCTGTTGCGCGGGCATCCTGTGCGTTGCAGGAGATGCAGCATCCATGAC $\tt CGCAACCCATCAGAGTGTTCTAAGAACGGAAGCATCTGGGCTGG\underline{\textbf{ATG}}\textbf{GAATTTAGCATCAAGCAGAGTCCCCTTT}$ CTGTTCAGAGTGTTGTAAAGTGCATAAAGATGAAGCAGGCACCAGAAATCCTCGGCAGTGCCAACGGGAAGACTC CGAGCTGCGAGGTGAACCGCGAGTGTTCTGTGTTCCTCAGCAAAGCCCAGCTCTCCAGTAGCCTGCAGGAGGGGG TCATGCAGAAGTTTAACGGCCACGACGCCCTGCCCTTTATTCCAGCCGACAAGCTGAAAGATCTTACTTCCCGGG TGTTTAATGGAGAACCCGGCGCACACGATGCCAAACTGCGTTTTGAGTCCCAGGAAATGAAAGGGATTGGGACAC CAGAAAACAAGGCGAGAAGGAACAGGAAGAGGAGCATAAAATATGACTCCTTGCTGGAGCAGGGCCTTGTCGAAG GAAGAGACAAAGACCACCTGTTGAAATACAACGTTGGTGATTTGGTGTGGTCCAAAGTGTCGGGTTACCCTTGGT GGCCTTGCATGGTTTCTGCAGATCCACTCCTTCACAGCTATACCAAACTTAAAGGTCAGAAAAAAGAGTGCACGCC AGTATCACGTACAGTTCTTTGGTGACGCCCCAGAAAGAGCTTGGATATTTGAGAAGAGCCTCGTAGCTTTTGAAG GAGAAGGACAGTTTGAAAAATTATGCCAGGAAAGTGCCAAGCAGGCACCCACGAAAGCTGAGAAAATTAAGCTAT TGAAACCAATTTCAGGGAAATTGAGGGCCCAGTGGGAAATGGGCATTGTTCAAGCAGAAGAAGCTGCAAGCATGT CAGTGGAGGAGCGGAAAGCCAAGTTCACCTTTCTCTATGTGGGGGACCAGCTTCATCTCAACCCTCAAGTAGCCA AGGAGGCTGGCATTGCTGCAGAGTCTTTGGGAGAAATGGCAGAATCCTCAGGAGTCAGTGAAGAAGCTGCTGAAA ACCCCAAGTCTGTGAGAGAGAGGGCATTCCCATGAAGAGAGGCGGAGGGCCAAACTGTGTAGCTCTGCAGAGA CCCTGGAGAGTCACCCCGACATAGGGAAGAGTACTCCTCAAAAGACGGCAGAGGCTGACCCCAGAAGAGAGTAG GGTCTCCTCCTGGGAGGAAGAAGACCACAGTCTCCATGCCACGAAGCAGGAAGGGAGATGCAGCATCCCAGTTTT TGGTCTTCTGTCAAAAACACAGGGATGAGGTGGTAGCTGAGCACCCAGATGCTTCAGGTGAGGAGATTGAAGAGC TGCTCAGGTCACAGTGGAGTCTGCTGAGTGAGAAGCAGAGAGCACGCTACAACACCAAGTTTGCCCTGGTGGCCC CTGTCCAGGCTGAAGAAGACTCTGGTAATGTAAATGGGAAAAAAAGAAACCACACAAAGAGGATACAGGACCCTA CAATCACTGACAAAACGGCCAGAACAAGCTCTTACAAGGCCATGGAGGCAGCCTCCTCGCTCAAGAGCCAGGCAG CAACGAAAAATCTGTCTGATGCATGTAAACCACTGAAGAAGCGAAATCGGGCTTCCACGGCAGCATCTTCAGCTC TTGGGTTTAGCAAAAGTTCATCTCCTTCTGCATCCTTAACTGAGAATGAGGTCTCGGACAGCCCGGGAGACGAGC CCTCGGAGTCCCCATACGAAAGTGCAGACGAAACACAAACTGAAGTATCTGTCTCATCCAAAAAGTCTGAGCGAG GAGTGACTGCCAAAAAGGAGTATGTGTGCCAGCTGTGTGAGAAGCCGGGCAGCCTCCTGCTCTGTGAAGGACCCT GCTGCGGAGCTTTCCACCTCGCCTGCCTTGGGCTTTCCCGGAGGCCAGAAGGGAGGTTCACCTGCAGCGAGTGTG GAAAATTTTACCATGAGGCTTGTGTGAAAAAATACCCTCTGACTGTATTTGAGAGCCGAGGTTTCCGCTGCCCCC TCCACAGCTGTGTGAGCTGCCATGCTTCCAACCCTTCAAACCCAAGGCCGTCAAAAGGTAAAATGATGCGGTGTG TCCGCTGCCCCGTTGCCTATCACAGCGGGGATGCTTGTCTGGCAGCAGGATGCTCAGTGATCGCCTCCAACAGCA TCATCTGCACTGCCCACTTCACTGCTCGGAAGGGGAAGCGACACCACGCCCACGTCAACGTGAGCTGGTGCTTCG TGTGCTCCAAAGGGGGGAGCCTTCTGTGCTGTGAGTCCTGCCCAGCGGCCTTCCACCCTGACTGCCTGAACATCG AGATGCCTGACGGCAGCTGGTTCTGCAATGACTGCAGGGCTGGGAAGAAGCTGCACTTCCAGGATATCATTTGGG TGAAACTTGGGAACTACAGATGGTGGCCGGCAGAAGTTTGCCATCCCAAAAATGTTCCCCCAAATATTCAGAAAA TGAAGCACGAGATTGGAGAATTCCCTGTGTTTTTCTTTGGGTCTAAAGATTATTACTGGACGCATCAGGCGCGAG TGTTCCCGTACATGGAGGGGACCGGGGCAGCCGCTACCAGGGGGTCAGAGGGATCGGAAGAGTCTTCAAAAACG GCAAGCCCCACCATACAAGCACATCAAGGTGAATAAGCCTTACGGGAAAGTCCAGATCTACACAGCGGATATTT CAGAAATCCCTAAGTGCAACTGCAAGCCCACAGATGAGAATCCTTGTGGCTTTGATTCGGAGTGTCTGAACAGGA

1480/6881 FIGURE 1376B

TGCTGATGTTTGAGTGCCACCCGCAGGTGTGTCCCGCGGGCGAGTTCTGCCAGAACCAGTGCTTCACCAAGCGCC AGTACCCAGAGACCAAGATCATCAAGACAGATGGCAAAGGGTGGGGCCTGGTCGCCAAGAGGGGACATCAGAAAGG AGAACGACATCACCCACTTCTACATGCTCACTATAGACAAGGACCGTATAATAGACGCTGGCCCCAAAGGAAACT ACTCTCGATTTATGAATCACAGCTGCCAGCCCAACTGTGAGACCCTCAAGTGGACAGTGAATGGGGGACACTCGTG TGGGCCTGTTTGCCGTCTGTGACATTCCTGCAGGGACGGAGCTGACTTTTAACTACAACCTCGATTGTCTGGGCA ATGAAAAAACGGTCTGCCGGTGTGGAGCCTCCAATTGCAGTGGATTCCTCGGGGATAGACCAAAGACCTCGACGA GGCAGTCAGAGGACGAGTGCTTCCGCTGCGGTGATGGCGGGCAGCTGGTGCTGTGACCGCAAGTTCTGCACCA ACGTGTGTGGCAAACCTTCGACTTCATTTTGCCACCTCTGCCCCAATTCGTTCTGTAAGGAGCACCAGGACGGGA GGGAGAGGGCGAGCATGAACTGGCCCGGAGGACCCAGCTCGAGCCGCCAGGACACAGACGTACAGGCCTCCTCGG GAGGGAGCGCCTCCCCACCACTGAGCCATCCTCAGCAGCGTCCGCTGCGCTCTGCACTGATGACCGTCTGAGCCCA GCTCAGCGTTCCTGGACAAACAGCCTCACTCCTCAGCGTTACCGCCACACTTGAATTTCTCCGAATGTCAAGGTT CCCTCCCACTCTATTTTTTTAGGTTAAAGTTAATTGGCATATGGAATGTTTTAATCTCCTCTGAAATGTGTAGCG TAGGCTTTTCCCAAGGGTCGCTAGAAACTCGTCTTCGCGTTGCCCCCTTTCTGGCTCTCAGCGCCGTCGCCACTC GGGAGAGGCTGGGTGAGGCCCGTGTGAGGACTGACCCTGGATTCCTCGAAACTGCCATTGTGATCATTACTCTGC TCTTTGGAAATGGCTGTATCATTTTTTTGTACTAATGTGAATTGTTCCTCAGAAACGCTTCTTTTCCATCCTAGT GAGAAGCTGGCCCTGCAGGTGGTGGCAGCAATGGTGTTGTAAGATTTCCTCCGTAGTTTTTTCTCCTCATGGAT TTGAATGAAATGCCAATAACACGTCCACTTTCAACGTGTAGTTTACGCGGAGCACTTTCGAGGCCTGGCCGGGTT ${\tt GGGCCTACTTCTCACCTGGGCCTATCTTCTGAACTCGCTAGGTTCTTATCAACATTTGGGGGGATAACTTTGTATA}$ TTTTTTCATTTGGCTTTTCTTTACCAGTTTCTGATTTTTATTCTCAATATATTTTTGCTAAACCTATTTCACAA ATCACCACCGACTGAAGTGTGTTTTACTGATGCGGCCCTGAGCTCCATGGCGAAAGGAGTGACTTTGCAGGGCG TGAGACCGCAGTCTGCTTAGAGCACAGGAAGTGACAACTTAGGGAGCCCCGTAGGGCGCTGCAGGCCCCGGGGAC ${\tt CCCAGCACGTGGGTCTAAAGAGAGAGGGGGTCTAGCTCTCCTGCCACCCAGAGTGGCTTCCATCTCAGCACTCTG}$ TGGGTCTGGTGATGGAAGATGCAGTCTCTGCTGATCACATGTGCCCTCTGCCAGGGCACCTACTGAGAGGTGCGG TCCTGGGGGTGGAGGCCTGCCTGGCAGGTGTGCGTGCCTCGTACGTGTTTATGGGCACTGGTCTAGGCCAGGTA GAGTACTACATATGTTTTAAGACTTGGTTCTTTTTTGAGGGATCCTTGACCCTGGGAAGTCTGGAGCACCCTGA AGAACTCCCCTTGAAAACTGCTGCTGAGGCTCCTGTTAAATTTTCTGTGGCATCTTTTATGCCTTGGTAAAAACT GCAGTGTCTTTGGACCTGAGAGTGGCTACTCCGTGGTTTTGTGACCTGTAAGCGTGGGGGTTCAGGGGTGTGTGGC GTCCCCAGCAAAGTTAACTACACAGAGGACCCAGGGGAAACGAGCTGTGTAGCCACTGACTTGCTCGCGCGGCCG TGGCCTCTGAGGGGCACTCGCCGGTTAAGACAGGGTGGGAGTAGTGCTTTCCAGTTCAGACTCTAACTTCTCCCA AAGTGTCCTAAGAAAATACTGGATCGGCTCATAGATTTATGCTCCTTATGATGCCCTAACTTGGAAGGTTGTTCT ${\tt AGGGACAGGCCGGGCAGTGTCCCCACACACACCTTAGAGTCGAAGGCCCCAGGGCCCGCTGTCACTTGCCCAAA}$ AGATCCCTTCCGGCAGGTAAGGGACTACCAATGCTTACGTCAAAACAGCAGAATCGGCTTTGCAGTGCACTTTGG GGAGCAGATATTAACTTATTTTTGTGTTGGACAGTAGTGAAATCTTGTGATTTTTAATCGCTTTGATAATACTTC CAAATTTTATGATTTTTCTGAAGGAAATAATGCAAACATTTTAAATATGTTTCTCCCCCTTTCCAAAAACTGTTA AACTAATGAGCAAGTAACACTAACTTTGAATGTCTCTACAATACCCGTTGATAACTCAGTGGAGCCAGGCTTTGG GGTAGCGGCCCTGAGCTTGCAGGGTTTCTCGCCACTGGGGCTGACCACGCCCCAGCTGTGACCGTGGGTGTGGC TGGCTCTCGGCCCTGCCCAGCTTTGTTCTGAGGACGTGGTGACTTCCTGAACATCAGCTTCAATCCTCCATCATT AATGTGAAGCAAAACCACAAAACCGCCCCAATCCCTCAGGATTCCTTGGCATCCGAAACCAGCATCTGCACCTAA

1481/6881 FIGURE 1376C

FIGURE 1377

 ${\tt MEFSIKQSPLSVQSVVKCIKMKQAPEILGSANGKTPSCEVNRECSVFLSKAQLSSSLQEGVMQKFNGHDALPFIP}$ $\verb"ADKLKDLTSRVFNGEPGAHDAKLRFESQEMKGIGTPPNTTPIKNGSPEIKLKITKTYMNGKPLFESSICGDSAAD"$ VSQSEENGQKPENKARRNRKRSIKYDSLLEQGLVEAALVSKISSPSDKKIPAKKESCPNTGRDKDHLLKYNVGDL VWSKVSGYPWWPCMVSADPLLHSYTKLKGQKKSARQYHVQFFGDAPERAWIFEKSLVAFEGEGQFEKLCQESAKQ APTKAEKIKLLKPISGKLRAQWEMGIVQAEEAASMSVEERKAKFTFLYVGDQLHLNPQVAKEAGIAAESLGEMAE ${\tt SSGVSEEAAENPKSVREECIPMKRRRRAKLCSSAETLESHPDIGKSTPQKTAEADPRRGVGSPPGRKKTTVSMPR}$ $\tt SRKGDAASQFLVFCQKHRDEVVAEHPDASGEEIEELLRSQWSLLSEKQRARYNTKFALVAPVQAEEDSGNVNGKK$ NRASTAASSALGFSKSSSPSASLTENEVSDSPGDEPSESPYESADETQTEVSVSSKKSERGVTAKKEYVCQLCEK ${\tt PGSLLLCEGPCCGAFHLACLGLSRRPEGRFTCSECASGIHSCFVCKESKTDVKRCVVTQCGKFYHEACVKKYPLT}$ VFESRGFRCPLHSCVSCHASNPSNPRPSKGKMMRCVRCPVAYHSGDACLAAGCSVIASNSIICTAHFTARKGKRH ${\tt HAHVNVSWCFVCSKGGSLLCCESCPAAFHPDCLNIEMPDGSWFCNDCRAGKKLHFQDIIWVKLGNYRWWPAEVCHMONTON CONTROL CONTROL$ ${\tt PKNVPPNIQKMKHEIGEFPVFFFGSKDYYWTHQARVFPYMEGDRGSRYQGVRGIGRVFKNALQEAEARFREIKLQ}$ ${\tt REARETQESERKPPPYKHIKVNKPYGKVQIYTADISEIPKCNCKPTDENPCGFDSECLNRMLMFECHPQVCPAGE}$ ${\tt FCQNQCFTKRQYPETKIIKTDGKGWGLVAKRDIRKGEFVNEYVGELIDEEECMARIKHAHENDITHFYMLTIDKD}$ RIIDAGPKGNYSRFMNHSCQPNCETLKWTVNGDTRVGLFAVCDIPAGTELTFNYNLDCLGNEKTVCRCGASNCSG FLGDRPKTSTTLSSEEKGKKTKKKTRRRRAKGEGKRQSEDECFRCGDGGQLVLCDRKFCTKAYHLSCLGLGKRPF GKWECPWHHCDVCGKPSTSFCHLCPNSFCKEHQDGTAFSCTPDGRSYCCEHDLGAASVRSTKTEKPPPEPGKPKG . KRRRRRGWRRVTEGK

FIGURE 1378A

TGGTCTTGAACTCCTGACCTTGTGATCCGCTCGCCTCAGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACC GTGCCTGTCCTAGAACCACTGGTAACTCTTAACTGAGACAAGATTTCGCCATGTTGCCCAGGCTGGTCTCGAACT TCTGAGCTCAAGCGATCTACCTGCCTCGTCCTCCCAAAGTGTTGGAATTGCAGGTGTGAGCCACTGCACCCGGCC $\tt CTTGCCTCATGTTTGAATGATAATTTACCTGGGCATAAAATTCTGGACACTTGTGGTGGCACGAGCTGTCTGCTT$ TTCTGTGGAGACTGCGGGTTGCAGACACCAGCAGCCCCTATTGCTGCACGTCAGGTGTCCTCCACCTCAGTACT GTGGACATCTCGGGCCGCATAGCCCTGTTGCGCGGGCATCCTGTGCGTTGCAGGAGATGCAGCATCCATGAC $\tt CGCAACCCATCAGAGTGTTCTAAGAACGGAAGCATCTGGGCTGG\underline{ATG}GAATTTAGCATCAAGCAGAGTCCCCTTT$ CTGTTCAGAGTGTTGTAAAGTGCATAAAGATGAAGCAGGCACCAGAAATCCTCGGCAGTGCCAACGGGAAGACTC CGAGCTGCGAGGTGAACCGCGAGTGTTCTGTGTTCCTCAGCAAAGCCCAGCTCTCCAGTAGCCTGCAGGAGGGGG TCATGCAGAAGTTTAACGGCCACGACGCCCTGCCCTTTATTCCAGCCGACAAGCTGAAAGATCTTACTTCCCGGG TGTTTAATGGAGAACCCGGCGCACACGATGCCAAACTGCGTTTTGAGTCCCAGGAAATGAAAGGGATTGGGACAC CAGAAAACAAGGCGAGAAGGAACAGGAAGAGGAGCATAAAATATGACTCCTTGCTGGAGCAGGGCCTTGTCGAAG GAAGAGACAAAGACCACCTGTTGAAATACAACGTTGGTGATTTTGGTGTGCCAAAGTGTCGGGTTACCCTTGGT GGCCTTGCATGGTTTCTGCAGATCCACTCCTTCACAGCTATACCAAACTTAAAGGTCAGAAAAAAGAGTGCACGCC AGTATCACGTACAGTTCTTTGGTGACGCCCCAGAAAGAGCTTGGATATTTGAGAAGAGCCTCGTAGCTTTTGAAG GAGAAGGACAGTTTGAAAAATTATGCCAGGAAAGTGCCAAGCAGGCACCCACGAAAGCTGAGAAAATTAAGCTAT TGAAACCAATTTCAGGGAAATTGAGGGCCCAGTGGGAAATGGGCATTGTTCAAGCAGAAGAAGCTGCAAGCATGT CAGTGGAGGAGCGGAAAGCCAAGTTCACCTTTCTCTATGTGGGGGACCAGCTTCATCTCAACCCTCAAGTAGCCA ${\tt AGGAGGCTGGCATTGCTGCAGAGTCTTTGGGAGAAATGGCAGAATCCTCAGGAGTCAGTGAAGAAGCTGCTGAAA}$ ACCCCAAGTCTGTGAGAGAGAGGCGATTCCCATGAAGAGAGGCGGAGGCCCAAACTGTGTAGCTCTGCAGAGA ${\tt CCCTGGAGAGTCACCCCGACATAGGGAAGAGTACTCCTCAAAAGACGGCAGAGGCTGACCCCAGAAGAGGAGTAG}$ GGTCTCCTCCTGGGAGGAGGAGACCACAGTCTCCATGCCACGAAGCAGGAAGGGAGGATGCAGCATCCCAGTTTT TGGTCTTCTGTCAAAAACACAGGGATGAGGTGGTAGCTGAGCACCCAGATGCTTCAGGTGAGGAGATTGAAGAGC TGCTCAGGTCACAGTGGAGTCTGCTGAGTGAGAAGCAGAGAGCACGCTACAACACCAAGTTTGCCCTGGTGGCCC CTGTCCAGGCTGAAGAAGACTCTGGTAATGTAAATGGGAAAAAAAGAAACCACACAAAGAGGATACAGGACCCTA CAGAAGATGCTGAAGCTGAGGACACCCCAGGAAAAGACTCAGGACGACAAGCACAGTCTTCGGAAGAGACACA CAACGAAAAATCTGTCTGATGCATGTAAACCACTGAAGAAGCGAAATCGGGCTTCCACGGCAGCATCTTCAGCTC TTGGGTTTAGCAAAAGTTCATCTCCTTCTGCATCCTTAACTGAGAATGAGGTCTCGGACAGCCCGGGAGACGAGC CCTCGGAGTCCCCATACGAAAGTGCAGACGAAACACAAACTGAAGTATCTGTCTCATCCAAAAAAGTCTGAGCGAG GAGTGACTGCCAAAAAGGAGTATGTGTGCCAGCTGTGTGAGAAGCCGGGCAGCCTCCTGCTCTGTGAAGGACCCT GCTGCGGAGCTTTCCACCTCGCCTGCCTTGGGCTTTCCCGGAGGCCAGAAGGGAGGTTCACCTGCAGCGAGTGTG CCTCAGGTGTCGCCCGGCACAGTCTGGGGTCTGTGAGGATGATGAGAGGACACCTGCACAGCCGTGGCCCTTCCT GCCTACTCACCGGGCCCAAGGAGTCTCCTATCTCACGTCAGAACACTTCCTGGGTCAGGAAGACACCTGGAGAGT ${\tt ACTGCTCCACCACTGGCCAGCTGCTCTCAAGGAGGAAAGGCCTCTTTTCA} \underline{{\tt TAG}} {\tt AGCCCCTTCTTTCAAGCTTCT}$ TGCCAGTTAGACTGGGCCTCCCCAGCCAGGCTGCCTAGTAAGATTCTCCTGTATTTCAGGTGAAGCTGGAGCTCA GATCGCAGCAAGGTAATCCTTGATGGCTGGATCTTTTTGCTGGAGAATGCTTGGACTAGTGAGCAAGGTTGGAAA CAGGGCCAGGTGCTTTAGCAGCGTGGCTGCCTCTGAAGAGGAGTTGCTTGATTTTAGTGGCTCAGAACTGCAATT TAATTCTTGTTCTTTGCACCTCTCTCCACCCCTTCTTTAACTTTTTGTTAGGGATTCACTCATGTTTCGTGTG TAAAGAGAGCAAGACAGATGTTAAGCGCTGTGTGGTAACTCAGTGTGGAAAATTTTACCATGAGGCTTGTGTGAA AAAATACCCTCTGACTGTATTTGAGAGCCGAGGTTTCCGCTGCCCCCCCACAGCTGTGAGCTGCCATGCTTC CAACCCTTCAAACCCAAGGCCGTCAAAAGGTAAAATGATGCGGTGTGTCCGCTGCCCCGTTGCCTATCACAGCGG GGATGCTTGTCTGGCAGCAGGATGCTCAGTGATCGCCTCCAACAGCATCATCTGCACTGCCCACTTCACTGCTCG GAAGGGGAAGCGACACCACGCCACGTCAACGTGAGCTGGTGCTTCGTGTGCTCCAAAGGGGGGAGCCTTCTGTG

FIGURE 1378B

CTGTGAGTCCTGCCCAGCGGCCTTCCACCCTGACTGCCTGAACATCGAGATGCCTGACGGCAGCTGGTTCTGCAA TGACTGCAGGGCTGGGAAGAAGCTGCACTTCCAGGATATCATTTGGGTGAAACTTGGGAACTACAGATGGTGGCC GGCAGAAGTTTGCCATCCCAAAAATGTTCCCCCAAATATTCAGAAAATGAAGCACGAGATTGGAGAATTCCCTGT GTTTTTCTTTGGGTCTAAAGATTATTACTGGACGCATCAGGCGCGAGTGTTCCCGTACATGGAGGGGGACCGGGG CAGCCGCTACCAGGGGGTCAGAGGGATCGGAAGAGTCTTCAAAAACGCACTGCAAGAAGCTGAAGCTCGTTTTCG GGTGAATAAGCCTTACGGGAAAGTCCAGATCTACACAGCGGATATTTCAGAAATCCCTAAGTGCAACTGCAAGCC CACAGATGAGAATCCTTGTGGCTTTGATTCGGAGTGTCTGAACAGGATGCTGATGTTTGAGTGCCACCCGCAGGT GTGTCCCGCGGGCGAGTTCTGCCAGAACCAGTGCTTCACCAAGCGCCAGTACCCAGAGACCAAGATCATCAAGAC CACTATAGACAAGGACCGTATAATAGACGCTGGCCCCAAAGGAAACTACTCTCGATTTATGAATCACAGCTGCCA GCCCAACTGTGAGACCCTCAAGTGGACAGTGAATGGGGACACTCGTGTGGGCCTGTTTGCCGTCTGTGACATTCC TGCAGGGACGGAGCTGACTTTTAACTACAACCTCGATTGTCTGGGCAATGAAAAAACGGTCTGCCGGTGTGGAGC CTCCAATTGCAGTGGATTCCTCGGGGATAGACCAAAGACCTCGACGACCCTTTCATCAGAGGAAAAAGGGCAAAAA GACCAAGAAGAAAACGAGGCGGCGCAGAGCAAAAGGGGAAGGGAAGAGGCAGTCAGAGGACGAGTGCTTCCGCTG TGGCAAGCGGCCCTTCGGGAAGTGGGAATGTCCTTGGCATCATTGTGACGTGTGTGGCAAACCTTCGACTTCATT TTGCCACCTCTGCCCCAATTCGTTCTGTAAGGAGCACCAGGACGGGACAGCCTTCAGCTGCACCCCGGACGGGCG GTCCTACTGCTGTGAGCATGACTTAGGGGCGGCATCGGTCAGAAGCACCAAGACTGAGAAGCCCCCCCAGAGCC AGGGAAGCCGAAGGGGAAGAGGCGGCGGCGGAGGGCTGGCGGAGAGTCACAGAGGGCAAATAGCGCCAGGCGGC TCCTCAGCAGCGTCCGCTGCGTCTGCACTGATGACCGTCTGAGCCCAGCTCAGCGTTCCTGGACAAACAGCCTCA GTTAATTGGCATATGGAATGTTTTAATCTCCTCTGAAATGTGTAGCGTAGGCTTTTCCCAAGGGTCGCTAGAAAC TCGTCTTCGCGTTGCCCCCTTTCTGGCTCTCAGCGCCGTCGCCACTCGGGAGAGGCTGGGTGAGGCCCGTGTGAG GACTGACCCTGGATTCCTCGAAACTGCCATTGTGATCATTACTCTGCTCTTTGGAAATGGCTGTATCATTTTTTT GTACTAATGTGAATTGTTCCTCAGAAACGCTTCTTTTCCATCCTAGTGAGAAGCTGGCCCTGCAGGTGGTGGCAG TTTCAACGTGTAGTTTACGCGGAGCACTTTCGAGGCCTGGCCGGGTTGGGCCTACTTCTCACCTGGGCCTATCTT CTGAACTCGCTAGGTTCTTATCAACATTTGGGGGATAACTTTGTATATTTTTTTCATTTGGCTTTTCTTTACCAG TTTCTGATTTTTATTCTCAATATATTTTTGCTAAACCTATTTCACAAATCACCACCGACTGAAGTGTGTTTTAC TGATGCGGCCCTGAGCTCCATGGCGAAAGGAGTGACTTTGCAGGGCGTGAGACCGCAGTCTGCTTAGAGCACAGG AAGTGACAACTTAGGGAGCCCCGTAGGGCGCTGCAGGCCCCGGGGACCCCAGCACGTGGGTCTAAAGAGAGACGG AGTCTAGCTCTCCTGCCACCCAGAGTGGCTTCCATCTCAGCACTCTGTGGGTCTGGTGATGGAAGATGCAGTCTC TGTGCGTGCCTCGTACGTGTTATGGGCACTGGTCTAGGCCAGGTATGACACCCACTCTCCTGTGAGATTTCAC TCTTTTTTTGAGGGATCCTTGACCCTGGGAAGTCTGGAGCACCCTGAGAAGGGGGGCACCATGTGTGCCCTTTGCCC ACGTGTCCTGAGGGGCTGCTTGTCTGGGAGGGAGGGAGAGAACATTCAGCAGCAGGTGCTTTTTTATGGCCTTTT CTTAAAATAACCTAAGGGGGACACATCCATCTTGCAGAGAAGTTTACAGAACTCCCCTTGAAAACTGCTGCTGAG GCTCCTGTTAAATTTTCTGTGGCATCTTTTATGCCTTGGTAAAAACTGCAGTGTCTTTGGACCTGAGAGTGGCTA CTCCGTGGTTTTGTGACCTGTAAGCGTGGGGTTCAGGGGTGTGTGGCCCTGCAGGGTCCCACGCCTCCCTGAGCA CTGACTGGAAGTTTCACTGGCTGGTGGCTGTCCCTTCTCCCATCAGGGTCCCCAGCAAAGTTAACTACACAGAGG ACCCAGGGGAAACGAGCTGTGGCCACTGACTTGCTCGCGGGGGCCGTGGCCTCTGAGGGGGCACTCGCCGGTTAA GACAGGGTGGGAGTAGTGCTTTCCAGTTCAGACTCTAACTTCTCCCAAAGTGTCCTAAGAAAATACTGGATCGGC TCATAGATTTATGCTCCTTATGATGCCCTAACTTGGAAGGTTGTTCTAGGGACAGGCCGGGCAGTGTCCCCACAC

FIGURE 1378C

ACACCTTAGAGTCGAAGGCCCCAGGGCCCCGCTGTCACTTGCCCAAAAGATCCCTTCCGGCAGGTAAGGGACTAC CAATGCTTACGTCAAAACAGCAGAATCGGCTTTGCAGTGCACTTTGGGGAGCAGATATTAACTTATTTTTGTGTT GGACAGTAGTGAAATCTTGTGATTTTTAATCGCTTTGATAATACTTCCAAATTTTATGATTTTTCTGAAGGAAAT AATGCAAACATTTTAAATATGTTTCTCCCCCTTTCCAAAAACTGTTAAACTAATGAGCAAGTAACACTAACTTTG AATGTCTCTACAATACCCGTTGATAACTCAGTGGAGCCAGGCTTTGGGGTAGCGGCCCTGAGCTTGCAGGGTTTC TGAGGACGTGGTGACTTCCTGAACATCAGCTTCAATCCTCCATCATTAATGTGAAGCAAAACACAAAAACCGCCC GGGGATGTGTCCGAATGGGCAGCTTAAAATGTGGTCACCTGTGGGGGAAACTCTTCAGGCACCTGAAGTGAGAAC TTGTCTGTCTTGACATCTAAACCCCGGCGTGTGCAGTGCCCATCTTCCAGGACTACCTTATTTTCCAGAATTAAA CCTGTTTTATAATTCAAGTTAATGCAAATGACTGTCAGTTGCCAAATATCTTGATCCTGTGAGTGTAGTTGATGA CTGTTTGTTAGTCAGTAGAGTAAAATGCTGTGTCCACGGGGTGTCACAGCCTCACCATACCCTGTTGAGGTGTGA AATGCCCCGTCAGAAATTAAATACAAACTTAAATGTGCCTATTGGTGTCTAAACTTCATACAATGTAAGGTCAGA TTCCTTTTAGGAATACTGGGTGCTGTCACCAGGTTTGATAGTTAGACTTAAAAACTTGAAATTCACTTTTTGGGG GGAGGGATATACTGAAATAGAGAGTTGAGACTTGCCAGTTGGGGGAAAATAGCATTTAAAATGGAAAGCTGTGTT TGGAAAATTGTGTATGAGTATTTTTGTATTAAAAACATTTTAAAGGCTTTTTTCTTAA

FIGURE 1379

MEFSIKQSPLSVQSVVKCIKMKQAPEILGSANGKTPSCEVNRECSVFLSKAQLSSSLQEGVMQKFNGHDALPFIP
ADKLKDLTSRVFNGEPGAHDAKLRFESQEMKGIGTPPNTTPIKNGSPEIKLKITKTYMNGKPLFESSICGDSAAD
VSQSEENGQKPENKARRNRKRSIKYDSLLEQGLVEAALVSKISSPSDKKIPAKKESCPNTGRDKDHLLKYNVGDL
VWSKVSGYPWWPCMVSADPLLHSYTKLKGQKKSARQYHVQFFGDAPERAWIFEKSLVAFEGEGQFEKLCQESAKQ
APTKAEKIKLLKPISGKLRAQWEMGIVQAEEAASMSVEERKAKFTFLYVGDQLHLNPQVAKEAGIAAESLGEMAE
SSGVSEEAAENPKSVREECIPMKRRRRAKLCSSAETLESHPDIGKSTPQKTAEADPRRGVGSPPGRKKTTVSMPR
SRKGDAASQFLVFCQKHRDEVVAEHPDASGEEIEELLRSQWSLLSEKQRARYNTKFALVAPVQAEEDSGNVNGKK
RNHTKRIQDPTEDAEAEDTPRKRLRTDKHSLRKRDTITDKTARTSSYKAMEAASSLKSQAATKNLSDACKPLKKR
NRASTAASSALGFSKSSSPSASLTENEVSDSPGDEPSESPYESADETQTEVSVSSKKSERGVTAKKEYVCQLCEK
PGSLLLCEGPCCGAFHLACLGLSRRPEGRFTCSECASGVARHSLGSVRMMRGHLHSRGPSCLLTGPKESPISRQN
TSWVRKTPGESPRPWQPHSSTSLMGVSVCLPRMISDCSTTGQLLSRRKGLFS

1487/6881 FIGURE 1380A

TGGTCTTGAACTCCTGACCTTGTGATCCGCTCGCCTCAGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACC GTGCCTGTCCTAGAACCACTGGTAACTCTTAACTGAGACAAGATTTCGCCATGTTGCCCAGGCTGGTCTCGAACT TCTGAGCTCAAGCGATCTACCTGCCTCGTCCTCCCAAAGTGTTGGAATTGCAGGTGTGAGCCACTGCACCCGGCC CTTGCCTCATGTTTGAATGATAATTTACCTGGGCATAAAATTCTGGACACTTGTGGTGGCACGAGCTGTCTGCTT TTCTGTGGAGACTGCGGGTTGCAGACACCAGCAGCCCCCTATTGCTGCACGTCAGGTGTCCTCCACCTCAGTACT GTGGACATCTCGGGCCGCATAGCCCTGTTGCGCGGGCATCCTGTGCGTTGCAGGAGATGCAGCAGCATCCATGAC CTGTTCAGAGTGTTGTAAAGTGCATAAAGATGAAGCAGGCACCAGAAATCCTCGGCAGTGCCAACGGGAAGACTC CGAGCTGCGAGGTGAACCGCGAGTGTTCTGTGTTCCTCAGCAAAGCCCAGCTCTCCAGTAGCCTGCAGGAGGGGG TCATGCAGAAGTTTAACGGCCACGACGCCCTGCCCTTTATTCCAGCCGACAAGCTGAAAGATCTTACTTCCCGGG TGTTTAATGGAGAACCCGGCGCACACGATGCCAAACTGCGTTTTGAGTCCCAGGAAATGAAAGGGATTGGGACAC CAGAAAACAAGGCGAGAAGGAACAGGAAGAGGAGCATAAAATATGACTCCTTGCTGGAGCAGGGCCTTGTCGAAG GAAGAGACAAAGACCACCTGTTGAAATACAACGTTGGTGATTTGGTGTGGTCCAAAGTGTCGGGTTACCCTTGGT GGCCTTGCATGGTTTCTGCAGATCCACTCCTTCACAGCTATACCAAACTTAAAGGTCAGAAAAAAGAGTGCACGCC AGTATCACGTACAGTTCTTTGGTGACGCCCCAGAAAGAGCTTGGATATTTGAGAAGAGCCTCGTAGCTTTTGAAG GAGAAGGACAGTTTGAAAAATTATGCCAGGAAAGTGCCAAGCAGGCACCCACGAAAGCTGAGAAAATTAAGCTAT TGAAACCAATTTCAGGGAAATTGAGGGCCCAGTGGGAAATGGGCATTGTTCAAGCAGAAGAAGCTGCAAGCATGT CAGTGGAGGAGCGAAAGCCAAGTTCACCTTTCTCTATGTGGGGGACCAGCTTCATCTCAACCCTCAAGTAGCCA AGGAGGCTGGCATTGCTGCAGAGTCTTTGGGAGAAATGGCAGAATCCTCAGGAGTCAGTGAAGAAGCTGCTGAAA ACCCCAAGTCTGTGAGAGAAGAGTGCATTCCCATGAAGAGAGGCGGAGGGCCCAAACTGTGTAGCTCTGCAGAGA CCCTGGAGAGTCACCCCGACATAGGGAAGAGTACTCCTCAAAAGACGGCAGAGGCTGACCCCAGAAGAGGAGTAG GGTCTCCTCCTGGGAGGAGAGACCACAGTCTCCATGCCACGAAGCAGGAAGGGAGATGCAGCATCCCAGTTTT TGGTCTTCTGTCAAAAACACAGGGATGAGGTGGTAGCTGAGCACCCAGATGCTTCAGGTGAGGAGATTGAAGAGC TGCTCAGGTCACAGTGGAGTCTGCTGAGTGAGAAGCAGGAGAGCACGCTACAACACCAAGTTTGCCCTGGTGGCCC CAATCACTGACAAAACGGCCAGAACAAGCTCTTACAAGGCCATGGAGGCAGCCTCCTCGCTCAAGAGCCAGGCAG CAACGAAAAATCTGTCTGATGCATGTAAACCACTGAAGAAGCGAAATCGGGCTTCCACGGCAGCATCTTCAGCTC TTGGGTTTAGCAAAAGTTCATCTCCTTCTGCATCCTTAACTGAGAATGAGCTTTTGTGGGAGCCCACACCAGTCA AGTTGGATTTGAACCCAGCTGCTCTGTACTGCACTTAGAATGATGTAATATTCCAGGATGCTGCAGGTGGCG TATCATCGTACACACTCAGTGACATTTCTATCACAATCATTTTATGGAAGATGTGTGATAATCTGTTTTTACTGG TATTAATAACACATACAATGAAGAAAACAGATAACAAATTTTAAGACCAAGGTCTCGGACAGCCCGGGAGACGA GCCCTCGGAGTCCCCATACGAAAGTGCAGACGAAACACAAACTGAAGTATCTGTCTCATCCAAAAAGTCTGAGCG AGGAGTGACTGCCAAAAAGGAGTATGTGTGCCAGCTGTGTGAGAAGCCGGGCAGCCTCCTGCTCTGTGAAGGACC CTGCTGCGGAGCTTTCCACCTCGCCTGCCTTGGGCTTTCCCGGAGGCCAGAAGGGAGGTTCACCTGCAGCGAGTG TGCCTCAGGGATTCACTCATGTTTCGTGTGTAAAGAGAGCAAGACAGATGTTAAGCGCTGTGTGGTAACTCAGTG TGGAAAATTTTACCATGAGGCTTGTGTGAAAAAATACCCTCTGACTGTATTTGAGAGCCGAGGTTTCCGCTGCCC CCTCCACAGCTGTGTGAGCTGCCATGCTTCCAACCCTTCAAACCCAAGGCCGTCAAAAGGTAAAATGATGCGGTG TGTCCGCTGCCCGTTGCCTATCACAGCGGGGATGCTTGTCTGGCAGCAGGATGCTCAGTGATCGCCTCCAACAG CATCATCTGCACTGCCCACTTCACTGCTCGGAAGGGGAAGCGACCACGCCCACGTCAACGTGAGCTGGTGCTT CGTGTGCTCCAAAGGGGGGAGCCTTCTGTGCTGTGAGTCCTGCCCAGCGGCCTTCCACCCTGACTGCCTGAACAT ${\tt CGAGATGCCTGACGGCAGCTGGTTCTGCAATGACTGCAGGGCTGGGAAGAAGCTGCACTTCCAGGATATCATTTG}$ GGTGAAACTTGGGAACTACAGATGGTGGCCGGCAGAAGTTTGCCATCCCAAAAATGTTCCCCCAAATATTCAGAA **AATGAAGCACGAGATTGGAGAATTCCCTGTGTTTTTCTTTGGGTCTAAAGATTATTACTGGACGCATCAGGCGCG** AGTGTTCCCGTACATGGAGGGGGACCGGGCAGCCGCTACCAGGGGGTCAGAGGGATCGGAAGAGTCTTCAAAAA

1488/6881 FIGURE 1380B

CGCACTGCAAGAAGCTGAAGCTCGTTTTCGTGAAATTAAGCTTCAGAGGGAAAGCCCGAGAAACACAGGAGAGCGA GCGCAAGCCCCACCATACAAGCACATCAAGGTGAATAAGCCTTACGGGAAAGTCCAGATCTACACAGCGGATAT TTCAGAAATCCCTAAGTGCAACTGCAAGCCCACAGATGAGAATCCTTGTGGCTTTGATTCGGAGTGTCTGAACAG GATGCTGATGTTTGAGTGCCACCCGCAGGTGTGTCCCGCGGGCGAGTTCTGCCAGAACCAGTGCTTCACCAAGCG CCAGTACCCAGAGACCAAGATCATCAAGACAGATGGCAAAGGGTGGGGCCTGGTCGCCAAGAGGGACATCAGAAA CGAGAACGACATCACCCACTTCTACATGCTCACTATAGACAAGGACCGTATAATAGACGCTGGCCCCAAAGGAAA CTACTCTCGATTTATGAATCACAGCTGCCAGCCCAACTGTGAGACCCTCAAGTGGACAGTGAATGGGGACACTCG TGTGGGCCTGTTTGCCGTCTGTGACATTCCTGCAGGGACGGAGCTGACTTTTAACTACAACCTCGATTGTCTGGG CAATGAAAAACGGTCTGCCGGTGTGGAGCCTCCAATTGCAGTGGATTCCTCGGGGATAGACCAAAGACCTCGAC GACCCTTTCATCAGAGGAAAAGGGCAAAAAGACCAAGAAGAAAACGAGGCGCGCAGAGCAAAAAGGGGAAGGAA GAGGCAGTCAGAGGACGAGTGCTTCCGCTGCGGTGATGGCGGGCAGCTGGTGCTGTGTGACCGCAAGTTCTGCAC CAAGGCCTACCACCTGTCCTGCCTGGGCCTTGGCAAGCGGCCCTTCGGGAAGTGGGAATGTCCTTGGCATCATTG TGACGTGTGTGGCAAACCTTCGACTTCATTTTGCCACCTCTGCCCCAATTCGTTCTGTAAGGAGCACCAGGACGG GCGGGAGAGGGCGAGCATGAACTGGCCCGGAGGACCCAGCTCGAGCCGCCAGGACACAGACGTACAGGCCTCCTC GGGAGGGAGCGCCTCCCCACCACTGAGCCATCCTCAGCAGCGTCCGCTGCGTCTGCACTGATGACCGTCTGAGCC CAGCTCAGCGTTCCTGGACAAACAGCCTCACTCCTCAGCGTTACCGCCACACTTGAATTTCTCCGAATGTCAAGG TTCCCTCCCACTCTATTTTTTTAGGTTAAAGTTAATTGGCATATGGAATGTTTTAATCTCCTCTGAAATGTGTAG CGTAGGCTTTTCCCAAGGGTCGCTAGAAACTCGTCTTCGCGTTGCCCCCTTTCTGGCTCTCAGCGCCGTCGCCAC TCGGGAGAGGCTGGGTGAGGCCCGTGTGAGGACTGACCCTGGATTCCTCGAAACTGCCATTGTGATCATTACTCT GCTCTTTGGAAATGGCTGTATCATTTTTTTGTACTAATGTGAATTGTTCCTCAGAAACGCTTCTTTTCCATCCTA GTGAGAAGCTGGCCCTGCAGGTGGTGGCAGCAATGGTGTTGTAAGATTTCCTCCCGTAGTTTTTTCTCCTCATGG ATTTGAATGAAATGCCAATAACACGTCCACTTTCAACGTGTAGTTTACGCGGAGCACTTTCGAGGCCTGGCCGGG TTGGGCCTACTTCTCACCTGGGCCTATCTTCTGAACTCGCTAGGTTCTTATCAACATTTGGGGGATAACTTTGTA TATTTTTTTCATTTGGCTTTTCTTTACCAGTTTCTGATTTTTATTCTCAATATATTTTTGCTAAACCTATTTCAC AAATCACCACCGACTGAAGTGTGTTTTACTGATGCGGCCCTGAGCTCCATGGCGAAAGGAGTGACTTTGCAGGG CGTGAGACCGCAGTCTGCTTAGAGCACAGGAAGTGACAACTTAGGGAGCCCCGTAGGGCGCTGCAGGCCCCGGGG ACCCCAGCACGTGGGTCTAAAGAGAGACGGAGTCTAGCTCTCCTGCCACCCAGAGTGGCTTCCATCTCAGCACTC TGTGGGTCTGGTGATGGAAGATGCAGTCTCTGCTGATCACATGTGCCCTCTGCCAGGGCACCTACTGAGAGGTGC GGTCCTGGGGGTGGAGGCCTGCCTGGCAGGTGTGCGTGCCTCGTACGTGTTTATGGGCACTGGTCTAGGCCAGG CTGAGTACTACATATGTTTTAAGACTTGGTTCTTTTTTTGAGGGATCCTTGACCCTGGGAAGTCTGGAGCACCCT ACAGAACTCCCCTTGAAAACTGCTGCTGAGGCTCCTGTTAAATTTTCTGTGGCATCTTTTATGCCTTGGTAAAAA CTGCAGTGTCTTTGGACCTGAGAGTGGCTACTCCGTGGTTTTGTGACCTGTAAGCGTGGGGTTCAGGGGTGTGTG GGGTCCCCAGCAAAGTTAACTACACAGAGGACCCAGGGGAAACGAGCTGTGTAGCCACTGACTTGCTCGCGCGGC CGTGGCCTCTGAGGGGCACTCGCCGGTTAAGACAGGGTGGGAGTAGTGCTTTCCAGTTCAGACTCTAACTTCTCC CAAAGTGTCCTAAGAAAATACTGGATCGGCTCATAGATTTATGCTCCTTATGATGCCCTAACTTGGAAGGTTGTT CTAGGGACAGGCCGGGCAGTGTCCCCACACACACCTTAGAGTCGAAGGCCCCAGGGCCCCGCTGTCACTTGCCCA AAAGATCCCTTCCGGCAGGTAAGGGACTACCAATGCTTACGTCAAAACAGCAGAATCGGCTTTGCAGTGCACTTT GGGGAGCAGATATTAACTTATTTTTGTGTTGGACAGTAGTGAAATCTTGTGATTTTTAATCGCTTTGATAATACT TCCAAATTTTATGATTTTTCTGAAGGAAATAATGCAAACATTTTAAATATGTTTCTCCCCCTTTCCAAAAACTGT TAAACTAATGAGCAAGTAACACTAACTTTGAATGTCTCTACAATACCCGTTGATAACTCAGTGGAGCCAGGCTTT

FIGURE 1380C

FIGURE 1381

MEFSIKQSPLSVQSVVKCIKMKQAPEILGSANGKTPSCEVNRECSVFLSKAQLSSSLQEGVMQKFNGHDALPFIP
ADKLKDLTSRVFNGEPGAHDAKLRFESQEMKGIGTPPNTTPIKNGSPEIKLKITKTYMNGKPLFESSICGDSAAD
VSQSEENGQKPENKARRNRKRSIKYDSLLEQGLVEAALVSKISSPSDKKIPAKKESCPNTGRDKDHLLKYNVGDL
VWSKVSGYPWWPCMVSADPLLHSYTKLKGQKKSARQYHVQFFGDAPERAWIFEKSLVAFEGEGQFEKLCQESAKQ
APTKAEKIKLLKPISGKLRAQWEMGIVQAEEAASMSVEERKAKFTFLYVGDQLHLNPQVAKEAGIAAESLGEMAE
SSGVSEEAAENPKSVREECIPMKRRRRAKLCSSAETLESHPDIGKSTPQKTAEADPRRGVGSPPGRKKTTVSMPR
SRKGDAASQFLVFCQKHRDEVVAEHPDASGEEIEELLRSQWSLLSEKQRARYNTKFALVAPVQAEEDSGNVNGKK
RNHTKRIQDPTEDAEAEDTPRKRLRTDKHSLRKRDTITDKTARTSSYKAMEAASSLKSQAATKNLSDACKPLKKR
NRASTAASSALGFSKSSSPSASLTENELLWEPTPVKLDLNPAALYCT

FIGURE 1382

GCGTCCCTGCTCACGGCCGCGGTCATCGACAACATCCGTCTCTGCTTCCATGGCCTCTCGTCGGCAGTGAAGCTC AAGTTGCTACTCGGGACGCTGCACCTCCCGCGCCCGCACGGTGGACGAGATGAAGGGCGCCCTAATGGAGATCATC TCGCTTAACCTGGAGCTGGAGGAGCAGAATCCCAACGTTCAGGATATTTTGGGAGAACTTAGAGAAAAGGTGGGT GAGTGTGAAGCGTCTGCCATGCTGCCACTGGAGTGCCAGTACTTGAACAAAAACGCCCTGACGACCCTCGCGGGA CCCCTCACTCCCCGGTGAAGCATTTTCAGTTAAAGCGGAAACCCAAGAGCGCCACGCTGCGGGGGGAGCTGCTG CAGAAGTCCACGGAGACCGCCCAGCAGTTGAAGCGGAGCGCCGGGGTGCCCTTCCACGCCAAGGGCCGGGGGCTG CTGCGGAAGATGGACACCACCCACTCAAAGGCATCCCGAAGCAGGCGCCCTTCAGAAGCCCCACGGCGCCC GCGGAGGTGGTGGAGAAGCCGGCCAAGGAGGAAACGGTGGTGGAGAACGCCACCCCGGACTACGCAGCCGGCCTG GTGTCCACGCAGAAACTTGGGTCCCTGAACAATGAGCCTGCGCTGCCCTCCACGAGCTACCTTCCCTCCACGCCC GAGAAGGCCCTCATCCTGGGCTTCATGGCCGGCTCCCGAGAGAACCCGTGCCAGGAGCAGGGGGACGTGATCCAG ATCAAGCTGAGCGAGCACACGGAGGACCTGCCCAAGGCGGACGGCCAGGGTAGCACAACCATGCTGGTAGACACA $\tt GTGTTTGAGATGAACTATGCCACGGGCCAGTGGACGCGCTTCAAGAAGTACAAGCCCATGACCAATGTGTCC\underline{TAG}$

MASMRESDTGLWLHNKLGATDELWAPPSIASLLTAAVIDNIRLCFHGLSSAVKLKLLLGTLHLPRRTVDEMKGAL MEIIQLASLDSDPWVLMVADILKSFPDTGSLNLELEEQNPNVQDILGELREKVGECEASAMLPLECQYLNKNALT TLAGPLTPPVKHFQLKRKPKSATLRAELLQKSTETAQQLKRSAGVPFHAKGRGLLRKMDTTTPLKGIPKQAPFRS PTAPSVFSPTGNRTPIPPSRTLLRKERGVKLLDISELDMVGAGREAKRRKTLDAEVVEKPAKEETVVENATPDY AAGLVSTQKLGSLNNEPALPSTSYLPSTPSVVPASSYIPSSETPPAPSSREASRPPEEPSAPSPTLPAQFKQRAP MYNSGLSPATPTPAAPTSPLTPTTPPAVAPTTQTPPVAMVAPQTQAPAQQQPKKNLSLTREQMFAAQEMFKTANK VTRPEKALILGFMAGSRENPCQEQGDVIQIKLSEHTEDLPKADGQGSTTMLVDTVFEMNYATGQWTRFKKYKPMT NVS

1493/6881 FIGURE 1384A

TCCCAGCCTGAAACCAACACATTTTCTAATAAGTTATTTAGACAGAATAGCACTCTGCATGACTTTAATTCTTGG GCGTTTTGCTGTTGGAAACCTGGAGGGAAACCCTGATTGGATGTCATTTCCTGCCATGGAGCACGCCTCCCAGCC CTGGCCTGCAGGGTGGGCAGGGTGGGGGGCAAGGGAGTCCGCAGCCTCCGGGAGGAGGGGGAGGGCGCTGCCTTG CACATTCAGCTTAGAAGTGGACCTGGCTTTGGTGGCAGGAGAAGAATAAACACTTGCCCAGACCCCTTTGTGTGG GGGAATTGGGGAGGGGTCGTGGCAGGCAGGGTGGGCCACGGAACTGGGTCCCAGGCATCAAGGCCACGTGCAGGG CCATGGAGGGATGCTTCTCACGAGGGCGTTCAGAAGCGAGGGACAGAGAAGCCCTGCGTCCAAGGGCCTT TTGTCCTGTTAGCAATTGAGGTGTGCAGAGCACTGTACAGACCCCACTCCCCTGTACATTCCTCCCTGGAGGTGC ${\tt CCGGTCCCGCTTGGGGATGGGAGTTTTGTAGACTGTACAGAAATCGGCACCCTATTTTCTTGCAGCTCAGATTT}$ TGTTAATCTGGAATATACAGACAGACGTAAAGTGTTTTAGCAAAATGGAAACAGATGTGTGCCTTTTTCCTCT GGGCCAGGTGGAGTCAGGTCTTGGGGGTGTCATGTCGGGGTGCTGCCAGCGTCCCTTGGTCCTGTGCCTTTGGAG CCTCGGGCTCCTGGGGTGCAGGGTGCTTGGGGGTGGCTGTTGGAGCCCACCGACGCCAGGGCAGGGCCTGGAGGC CCAGGGACTGCCAGTGTCTCCTTGATATTGATCCTAGCAGATCCCCCTCCTGGGGGTTCTGAGAGTCCTGGGCAG TGAGACGCTTGGCCTTTTTTGTTGCTGCCAGGACTTGGTAGAGATGGCAGGAAGGGTGTGCCGGGGTGGTTGTGTG TGCCAGGCCAATGTGTAGCTTGGTGGCGCCCTTGAAGGCCACTGGGGGGTAGGTGTGTCCTCCCCCGGGGCTGGA GGCCGGGTGCCTGGTGGGCCTGACCTGGCCCACCTCATCCCTCCAGCCTGGGATCTCACTGCTCTGCACCT GTGCACTGACGTGAATTTTATACGTTTGTAGAAACTCTGATGTAACTTCTTCTACCTCTGAAGCGCCCTCCTGGG AAACTCTGCGTGGTGAGGCCCGGGGAAAGCCAGGCCGGGCCCTAGCACTGCTCAGGGGCCCTGGGGCTCCTGGGAT AGAGCTGGGCGAAGGAGGACATCCTCACTGGACGAGCACTGCAGGCCTGACGAGAGGCTCCGGGCAGCTGAGGGC TGAAGCGCCTCGGGATGCCCCACACTGCCCAGAGCCACGGGTCTTGCTGTGCTGGGGGTGGGGTGGCCCCAGGCA GCTGCCACTGCCCAGGTGTGAGTCGCTGCAGACCTGGTCCCTGAGGGTGGGAGGCCTGCTTGTGCTGAAGCTGCC ATGTGGTCTGGCCCCCAGAAGGGCTCCTGAGCGTAGGGAGTTGAGCCCCGCAGCCGTGGCGGCATCTCCTCCTCC TTCCTCCGCCCCATGCCCAGCCTTGCTTCCGGCTGGTGGCATGCCTTGGGGCCGGGCAGCAGGTGAGAAGCTGCC TGGGAGGCCCTGTGGACAGCAGGCCTGAGGCCACGAGGTCCTGGGGCCACCCCTCTCCTGCTCTGGGTGTCCTTC TCAGAGAAGATGGCAGAAGGCTGCAGGCCCTAGAGGGGACGACGGGCTGGGGACGCCCTGAGCTTCCTGGCTGTG TGGCAGGTGCTGGGGAAGCTCTCTGGGCCATAGGGACCTGGCTCCCCTCTGAGAGGCCCGCCTGCCCTGGGACAC CCAGGGCTGTGCTGGCCTGAGGCTGGGAACTTGGGTTCCTGGGCTCTGCTGGCGCCTTGGGCTTTGTGGGGGC CGAAGGTGGTTGCCCCGCCGGGCAGGGGCTGTGTGGGCCCTCGTGGGGCCACCTTCCTGTCAGTGCCCGAGGGA CGGTGGGACAGTTGCCCCTGCGCCAAGGGAGCCCACTGCCATCCCCGTGGGCTGGCGCTGCAGTCGCGCACCCT GTGTTGCCTGCTGACTTGCTTATGTCTGTTTGGAAGCTGCTTCTGTTTGGCCACAGGCCTGTGTTCCTGGGCTGA TGGCCACAGAGCTGACACTTGGGGTTTGAGTTCCAGACTTGCAGACCCTGGGATCCGCTTACTCCTCCGCGCCAC GGCTGCTGTGCTTCCAGAGGTGGCGTGATGCCTCCCGGGGCCACGGTGGGGTGAAGGATGGCGAGCCGGACATAC GTGCACGTGTTTGAGCGTGTGTGTGTGTGTGCAAGTGGGTTCTTGGATATGTGTAGTGTGAGCATGTGTGCATGT ATAGGTGTACATGTGCATGAGTTGTGTACATGCGTGAGCACGTGTATAGATGTACGTGTGTGCGCATGTGTGC GTGTACATGTGTTTGTGTCTTGGGTATGCATAAGCATGCACGTGTGTATGAATGTGCGTGTGTATGCATGAGCAC ATGGGTGAGCATGCACATGTGTATGGATGCATATGTGAGCTGTACATGTAGAGTGTACATGTGTGTTGCATGAGC

FIGURE 1384B

 ${\tt MSMHACECLCVYLHICGCAGTRRWWAGSARGSRSCSRLPCWAPGPGLSLPGPSCPSVEQGLGGGPGQLQGRSGEARGEHRGWGSPAAVCSRNCTVSPRRGQIVLRPQMCQNSPQGGGERVLRRGAAGAGGGCVPLP}$

GAGGAGCTCTCCTGGGCGGCTGAAGAAGGAGCTTCTTCTCCGGAGTGCGAAGGCGGTGGCGCCTGCGGACCTAAC TAGCTCCAGGTTAGGCCGAGCTTTGCGGGAAAGCAGCGGACTTGAAAATACTGGAAATCTGTCCGGATCCAAATT ATTTTGCAAGCCAGATGAGTAACCAGAGGGCATGAAAGGTTGAGAACATTTGACTTCCCTGCAAACCTTGGTATA GATCACTTCCTTTTCTGTAGGAAAGGAAAGGCACCAAAGAGCACAAAGAGCACAAAGAAAGCGTCGTGGTGGAGCA ATAAATTCTAGACAAGCTCAGAAGCGAACTCGGGAAGCAACCTCCACCCCGAGATCTCCTTGGAAGCAGAACCC ATAGAACTCGTGGAAACTGCTGGAGATGAAATTGTGGACCTCACTTGTGAATCTTTAGAGCCTGTGGTGGTTGAT CTGACTCACAATGACTCTGTTGTGATTGTTGACGAAAGAAGAAGACCAAGGAGGAATGCTAGGAGGCTGCCCCAG GACCATGCTGACAGCTGTGTGGTGAGCAGTGACGATGAGGAGTTGTCCAGGGACAGAGACGTATATGTGACTACC CATACTCCCAGAAACGCCAGGGATGAGGGCGCTACAGGCCTCAGGCCCTCAGGTACTGTCAGTTGTCCCATCTGC ATGGACGGATACTCAGAGATCGTGCAGAATGGACGTCTCATCGTTTCCACAGAATGCGGCCATGTCTTCTGTAGC CAGTGCCTCCGTGATTCCCTGAAGAATGCTAATACTTGCCCAACTTGTAGGAAAAAGATCAACCACAAACGGTAC TGGTATCTGCCTCCATTTTCCTGAGATCAAAAAGACTGTTTCGAAACCAACATCTGATATGTAAACTGCTCTTTT GTTTCCAACCCCTTCCTTTTGTTATCTCCAGTTTGATGCTATGGCGCTGGACCCAGGGCCCTCCCAGGCCATCTC TGTTCCTCTGGGGTGGTCCAGTTCTAGÅGTGGGAGAAAGGGAGTCAGGCGCATTGGGAATCGTGGTTCCAGTCTG GTTGCAGAATCTGCACATTTGCCAAGAAATTTTCCCTGTTTGGAAAGTTTGCCCCAGCTTTCCCGGGCACACCAC TCGAGGATCCCAGGTTGAAGAGTGGCCCCTTGAGGCCCTGGAAAGACCAATCACTGGACTTCTTCCCTTGAGAGT CAGAGGTCACCCGTGATTCTGCCTGCACCTTATCATTGATCTGCAGTGATTTCTGCAAATCAAGAGAAACTCTGC AGGGCACTCCCCTGTTTCCTAAGAACGAAAAAGTGCAATAAAGGCCATTCGTTACCTACTTTTCAGCAGCCCACA AGATGTAGCACTATTAGTGTCCCCCTCAGAGGCTTAATGTTGCCTGTGGAGCAGTGCCCATCCCAGCCCGTTTCT GCCCACCAGTTGTTCTCAGGAACCTTACCCATGCTCCAGCGTCCTTCACCTGGCACAGGACATGCAAGATAAATA CAGTTCCCACTGCCTAACGTCTGCCCCCGTGTAGATACTGAGAGGTGGTGGCAGTAATTGTGGCCTTATCAGCCG CTCAGTTCCAGGCTTTTGCCCAGGTCACTGTTGCCCCATGTTCGGAGAACCTGGCCCACCTGTCTTGGCTTTCTC ATCCTTCCCAACCCAGTGCCGTTTATTTCAGAAGCTTCCTGGCCACTGGGCTTGGATGCTTCGGGCTTCTGACTG $\tt CTCCATAGGTTTTGACTGGTGAAACAGGGGCCCAGATGACAACCTCTCCTTCGCTCCACAGGTACGCGGGAGCCT$ TTTCGTGTGAAACATCTTCAGGGCGGGAAAGGGGCCACTTCTGGCTTTGTTAGCAATAACTGACCTTCAGTTTAC CCTTCTGAAGGAGCAGGGACTCAGCACAGAATTCACTTTAGACGGGGCTGAAGGAGTGTCCCTCCTATGTGAA AATTTTCTACTTGGAGTTGAAGAGGGCAGAATCCGCAGCTCTCATCATTGTGATGTTGTAGCATGTCTGCCCTCTG ACTGGACATCATTGCCATTAACTTTCTTCTGGGCATCACGGCAGTGTCACGATGCCCAGACTTGGAGCAAGGCAA CCTTGGAGTCAGTCCACTCATAAAATATGGTAACACCCATTTTAAAATTTAAGTTTTGTCCTTAAAGACAACTTC AGTGGTTAATTATAAAAGTTGTTTACTTCGTCCTAAATTAAATTGATAGAAAGATTTAAAAATGTGTTTTGTTT $\verb|CTACTATTCAGAAACTGCGAACTAGGGAAAGGTTGGTATGAAAAAATGTCTTTCCTTTTTTCAATGTACATAGTT|\\$ CAACTCTTTCTTTGTTACATTTAAACTATATCCATGGATATCAGTCTGCTTTGGACTCCTCTGCTAGTGTTACAG

MSTRKRRGGAINSRQAQKRTREATSTPEISLEAEPIELVETAGDEIVDLTCESLEPVVVDLTHNDSVVIVDERRR PRRNARRLPQDHADSCVVSSDDEELSRDRDVYVTTHTPRNARDEGATGLRPSGTVSCPICMDGYSEIVQNGRLIV STECGHVFCSQCLRDSLKNANTCPTCRKKINHKRYHPIYI

1498/6881 FIGURE 1388A

 ${\tt CCGCCGCGCGGGGGGGGGGGCGCGCGCGTGTTAGGAACCTAGAAAGATTGTACA{\tt ATG}{\tt AATGGTGATTCT}}$ CGTGCTGCGGTGGTGACCTCACCACCCCCGACCACAGCCCCTCACAAGGAGAGGTACTTCGACCGAGTAGATGAG AACAACCCAGAGTACTTGAGGGAGGGAACATGGCACCAGACCTTCGCCAGGACTTCAACATGATGGAGCAAAAG AAGAGGGTGTCCATGATTCTGCAAAGCCCTGCTTTCTGTGAAGAATTGGAATCAATGATACAGGAGCAATTTAAG AAGGGGAAGAACCCCACAGGCCTATTGGCATTACAGCAGATTGCAGATTTTATGACCACGAATGTACCAAATGTC TACCCAGCAGCTCCGCAAGGAGGGATGGCTGCCTTAAACATGAGTCTTGGTATGGTGACTCCTGTGAACGATCTT AGAGGATCTGATTCTATTGCGTATGACAAAGGAGAGAGTTATTACGGTGTAAATTGGCAGCGTTTTATAGACTA GCAGATCTCTTTGGGTGGTCTCAGCTTATCTACAATCATATCACAACCAGAGTGAACTCCGAGCAGGAACACTTC CTCATTGTCCCTTTTGGGCTTCTTTACAGTGAAGTGACTGCATCCAGTTTGGTTAAGATCAATCTACAAGGAGAT ATAGTAGATCGTGGAAGCACTAATCTGGGAGTGAATCAGGCCGGCTTCACCTTACACTCTGCAATTTATGCTGCA CGCCCGGACGTGAAGTGCGTCGTGCACATTCACACCCCAGCAGGGGCTGCGGTCTCTGCAATGAAATGTGGCCTC TTGCCAATCTCCCCGGAGGCGCTTTCCCTTGGAGAAGTGGCTTATCATGACTACCATGGCATTCTGGTTGATGAA GAGGAAAAAGTTTTGATTCAGAAAAATCTGGGGCCTAAAAGCAAGGTTCTTATTCTCCGGAACCATGGGCTCGTG TCAGTTGGAGAGCGTTGAGGAGGCCTTCTATTACATCCATAACCTTGTGGTTGCCTGTGAGATCCAGGTTCGA ACTCTGGCCAGTGCAGGAGGACCAGACAACTTAGTCCTGCTGAATCCTGAGAAGTACAAAGCCAAGTCCCGTTCC CCAGGGTCTCCGGTAGGGGAAGGCACTGGATCGCCTCCCAAGTGGCAGATTGGTGAGCAGGAATTTGAAGCCCTC AAATACAGCGATGTGGAGGTTCCTGCTAGTGTCACAGGTTACTCCTTTGCTAGTGACGGTGATTCGGGCACTTGC TCCCCACTCAGACACAGTTTTCAGAAGCAGCAGCGGGAGAAGACAAGATGGCTGAACTCTGGCCGGGGCGACGAA GCTTCCGAGGAAGGGCAGAATGGAAGCAGTCCCAAGTCGAAGACTAAGTGGACTAAAGAGGATGGACATAGAACT TCCACCTCTGCTGTCCCTAACCTGTTTGTTCCATTGAACACTAACCCAAAAGAGGTCCAGGAGATGAGGAACAAG ATCCGAGAGCAGAATTTACAGGACATTAAGACGGCTGGCCCTCAGTCCCAGGTTTTGTGTGGTGTAGTGATGGAC AGGAGCCTCGTCCAGGGAGAGCTGGTGACGGCCTCCAAGGCCATCATTGAAAAGGAGTACCAGCCCCACGTCATT GTGAGCACCACGGGCCCCAACCCCTTCACCACACTCACAGACCGTGAGCTGGAGGAGTACCGCAGGGAGGTGGAG AGGAAGCAGAAGGGCTGTGAAGAGAATCTGGACGAGGCTAGAGAACAGAAAAGAAAAGAGTCCTCCAGACCAGCCT $\mathtt{CCC} \underline{\mathtt{TAA}}\mathtt{CCTTGTGCCGGAGCCGACTACTGGAGATGACAGTGATGCTGCCACCTTTAAGCCAACTCTCCCCGATCT$ GTCCCCTGATGAACCTTCAGAAGCACTCGGCTTCCCAATGTTAGAGAAGGAGGAGGAAGCCCATAGACCCCCAAG CCCCACTGAGGCCCCTACTGAGGCCAGCCCCGAGCCCAGACCCAGCCCCGGTGGCTGAAGAGGCTGCCCC CTCAGCTGTCGAGGAGGGGGCCGCCGCGGACCCTGGCAGCGATGGGTCTCCAGGCAAGTCCCCGTCCAAAAAGAA GAAGAAGTTCCGTACCCCGTCCTTTCTGAAGAAGAGAGAAGAAGAAGAGTGACTCCTGAAAAGCCCTGCGCTAACAC TGTCCTGTCCGGAGCGACCCTGGCTCTGCCAGCGTCCCCGGCCACGTCTGTGCTCTTGTGTAATGGAATG CAAAAAAGCCAAGCCCTCCGCCTAGAGGTCCCCTCACGTGACCAGCCCCGTGTAGCCCCGGGCTGACCCAGTGTG TGCTCAGCAGCCCCACCCTGCCCCTTGTCCTCTCAGAGCCTCAGCTTCTGGGGGAGACATGCTCTCCCCA CAGGGGGGGGCACTAAGTCATGGTCCTGGCTGGAAGGTACTGAAGGCTTCTGCAGCTTTGGCTGCACGTCACCC TCCTGAGCCTCACCTTTCCTGCCGTCCCTCTGTTGTGAAATCACCACATTCTGTCTCTGCTTGGCTTCCCCTCC ACCCTAAAGTCTCAGGTGACGGACTCAGACTCCTGGCTTCATGTGGCATTCTCTCTGCTCAGTGATCTCACTTAA ATCTATATACAAAGCCTTGGTCCCGTGAAAACACTCGTGTGCCCACCAGCGGCCTTGAAGAGGCAGGTCTGGGCC AGATGCTGGGCAGGAAACCCCAGCGGCAGATGGGCCTGTGTGCACCCAACGTGATGCTATGCATGTCTGACCGAC GATCCCTCGACCAGAATCAGATTCAGGAGCTCAGTTTCTTTTTCACTTGGGTCTCTGGATTCCTGTCATAGGGAA GGTATATCAGGAGGGGAAGAGGCCTTTCTAGAATTTTCTTTGAGCAGGTTTACAATTTAGCTTACATTTTTCGAC TGTGAACGTGAATAGGCTGCTTTTTGCTTTCTTTCCAGACCCCACAGTAGAGCACTTTTCACTTATTTGGGG GAGGCTTCAGGGGACTGTTCTCACCTTAACTCAGCCAGAAAGATGCCCTAGTTGTGATCAAAGGTAACTCGAGGT GGAGGGTAGCCCTGGGGCCCCTCGACATCACCGTCATTGATGGAGCCTGAACCGTGTGCTCCTCGGCAGATGCTG TTGTTGTTACTTCCCTCCAAGAGGCTGGAAAAGGGCTCAGAGCTGCTGAGCAGGAACCGGAGGGTGACCCATTTC AGGAGGTGCCGGTACCAGCCTGACTAGGTACAGGCAAGCTTGTGTGGGCCCCAACAGGCCCTTGGTAGAGCTGGTG

1499/6881 FIGURE 1388B

MNGDSRAAVVTSPPPTTAPHKERYFDRVDENNPEYLRERNMAPDLRQDFNMMEQKKRVSMILQSPAFCEELESMI QEQFKKGKNPTGLLALQQIADFMTTNVPNVYPAAPQGGMAALNMSLGMVTPVNDLRGSDSIAYDKGEKLLRCKLA AFYRLADLFGWSQLIYNHITTRVNSEQEHFLIVPFGLLYSEVTASSLVKINLQGDIVDRGSTNLGVNQAGFTLHS AIYAARPDVKCVVHIHTPAGAAVSAMKCGLLPISPEALSLGEVAYHDYHGILVDEEEKVLIQKNLGPKSKVLILR NHGLVSVGESVEEAFYYIHNLVVACEIQVRTLASAGGPDNLVLLNPEKYKAKSRSPGSPVGEGTGSPPKWQIGEQ EFEALMRMLDNLGYRTGYPYRYPALREKSKKYSDVEVPASVTGYSFASDGDSGTCSPLRHSFQKQQREKTRWLNS GRGDEASEEGQNGSSPKSKTKWTKEDGHRTSTSAVPNLFVPLNTNPKEVQEMRNKIREQNLQDIKTAGPQSQVLC GVVMDRSLVQGELVTASKAIIEKEYQPHVIVSTTGPNPFTTLTDRELEEYRREVERKQKGCEENLDEAREQKEKS PPDQPAVPHPPPSTPIKLEEGDGCAREYLLP

FIGURE 1390A

CGGCGCGCCGGCCGAGGTGGGATCCCGAGGCCTCTCCAGTCCGCCGAGGGCGCACCACCGGCCCGTCTCGC $\tt CCGCCGCGCGGGGGGGGGGGGCGCGCGCGCGTGTTAGGAACCTAGAAAGATTGTACA {\color{red} \underline{ATG}} {\color{black} ATGGTGATTCT}$ CGTGCTGCGGTGGTGACCTCACCACCCCCGACCACAGCCCCTCACAAGGAGAGGTACTTCGACCGAGTAGATGAG AACAACCCAGAGTACTTGAGGGAGGAACATGGCACCAGACCTTCGCCAGGACTTCAACATGATGGAGCAAAAG AAGAGGGTGTCCATGATTCTGCAAAGCCCTGCTTTCTGTGAAGAATTGGAATCAATGATACAGGAGCAATTTAAG AAGGGGAAGAACCCCACAGGCCTATTGGCATTACAGCAGATTGCAGATTTTATGACCACGAATGTACCAAATGTC TACCCAGCAGCTCCGCAAGGAGGGATGGCTGCCTTAAACATGAGTCTTGGTATGGTGACTCCTGTGAACGATCTT AGAGGATCTGATTCTATTGCGTATGACAAAGGAGAGAGATTATTACGGTGTAAATTGGCAGCGTTTTATAGACTA GCAGATCTCTTTGGGTGGTCTCAGCTTATCTACAATCATATCACAACCAGAGTGAACTCCGAGCAGGAACACTTC CTCATTGTCCCTTTTGGGCTTCTTTACAGTGAAGTGACTGCATCCAGTTTGGTTAAGATCAATCTACAAGGAGAT ATAGTAGATCGTGGAAGCACTAATCTGGGAGTGAATCAGGCCGGCTTCACCTTACACTCTGCAATTTATGCTGCA CGCCCGGACGTGAAGTGCGTCGTGCACATTCACACCCCAGCAGGGGCTGCGGTCTCTGCAATGAAATGTGGCCTC TTGCCAATCTCCCCGGAGGCGCTTTCCCTTGGAGAAGTGGCTTATCATGACTACCATGGCATTCTGGTTGATGAA GAGGAAAAAGTTTTGATTCAGAAAAATCTGGGGCCTAAAAGCAAGGTTCTTATTCTCCGGAACCATGGGCTCGTG TCAGTTGGAGAGCGTTGAGGAGGCCTTCTATTACATCCATAACCTTGTGGTTGCCTGTGAGATCCAGGTTCGA ACTCTGGCCAGTGCAGGAGGACCAGACACTTAGTCCTGCTGAATCCTGAGAAGTACAAAGCCAAGTCCCGTTCC CCAGGGTCTCCGGTAGGGGAAGGCACTGGATCGCCTCCCAAGTGGCAGATTGGTGAGCAGGAATTTGAAGCCCTC AAATACAGCGATGTGGAGGTTCCTGCTAGTGTCACAGGTTACTCCTTTGCTAGTGACGGTGATTCGGGCACTTGC TCCCCACTCAGACACAGTTTTCAGAAGCAGCAGCGGGAGAAGACAAGATGGCTGAACTCTGGCCGGGGCGACGAA GCTTCCGAGGAAGGGCAGAATGGAAGCAGTCCCAAGTCGAAGACTAAGGTGTGGACGAACATTACACACGATCAC GTGAAACCCTTGCTGCAGTCTCTCTCGTCCGGTGTCTGCGTGCCAAGCTGTATTACCAACTGCTTGTGGACTAAA CAGGAGATGAGGAACAAGATCCGAGAGCAGAATTTACAGGACATTAAGACGGCTGGCCCTCAGTCCCAGGTTTTG TGTGGTGTAGTGATGGACAGGAGCCTCGTCCAGGGAGAGCTGGTGACGGCCTCCAAGGCCATCATTGAAAAGGAG TACCAGCCCCACGTCATTGTGAGCACCACGGGCCCCAACCCCTTCACCACACTCACAGACCGTGAGCTGGAGGAG TACCGCAGGGAGGTGGAGAGGAAGCAGAAGGGCTGTGAAGAAATCTGGACGAGGCTAGAGAACAGAAAAAAG AGTCCTCCAGACCAGCCTGCGGTCCCCACCCGCCTCCCAGCACTCCATCAAGCTGGAGGAAGACCTTGTGCCG GAGCCGACTACTGGAGATGACAGTGATGCTGCCACCTTTAAGCCAACTCTCCCCGATCTGTCCCCTGATGAACCT TCAGAAGCACICGGCTTCCCAATGTTAGAGAAGGAGGAGGAAGCCCATAGACCCCCAAGCCCCACTGAGGCCCCT ACTGAGGCCAGCCCGAGCCCAGACCCAGCCCCGGTGGCTGAAGAGGCTGCCCCCTCAGCTGTCGAGGAG GGGGCCGCCGGGACCCTGGCAGCGATGGGTCTCCAGGCAAGTCCCCGTCCAAAAAGAAGAAGAAGAAGTTCCGTACC CCGTCCTTTCTGAAGAAGAGCAAGAAGAAGAGTGACTCC<u>TGA</u>AAGCCCTGCGCTAACACTGTCCTGTCCGGAGCG ACCCTGGCTCTGCCAGCGTCCCCGGCCACGTCTGTGCTCTGTCCTTGTGTAATGGAATGCAAAAAAAGCCAAGCCC TCCGCCTAGAGGTCCCCTCACGTGACCAGCCCCGTGTAGCCCCGGGCTGACCCAGTGTGTGCTCAGCAGCCCCAC CCCACCCTGCCCCTTGTCCTCTCAGAGCCTCAGCTTCTGGGGGAGACATGCTCTCCCCACAGGGGGGAGCACTA AGTCATGGTCCTGGCTGGAAGGTACTGAAGGCTTCTGCAGCTTTGGCTGCACGTCACCCTCCTGAGCCTCACCTT TCCTGCCGTCCCTCCTGTTGTGAAATCACCACATTCTGTCTCTGCTTGGCTTCCCCTCCACCCTAAAGTCTCAGG TGACGGACTCAGACTCCTGGCTTCATGTGGCATTCTCTCTGCTCAGTGATCTCACTTAAATCTATATACAAAGCC TTGGTCCCGTGAAAACACTCGTGTGCCCACCAGCGGCCTTGAAGAGGCAGGTCTGGGCCAGATGCTGGGCAGGAA ACCCCAGCGGCAGATGGGCCTGTGTGCACCCAACGTGATGCTATGCATGTCTGACCGACGATCCCTCGACCAGAA TCAGATTCAGGAGCTCAGTTTCTTTTTCACTTGGGTCTCTGGATTCCTGTCATAGGGAAGGTATATCAGGAGGGG AAGAGGCCTTTCTAGAATTTTCTTTGAGCAGGTTTACAATTTAGCTTACATTTTTCGACTGTGAACGTGAATAGG CTGCTTTTTGCTTTCTTTCCAGACCCCACAGTAGAGCACTTTTCACTTATTTGGGGGAGGCTTCAGGGGACT GTTCTCACCTTAACTCAGCCAGAAAGATGCCCTAGTTGTGATCAAAGGTAACTCGAGGTGGAGGGTAGCCCTGGG GCCCCTCGACATCACCGTCATTGATGGAGCCTGAACCGTGTGCTCCTCGGCAGATGCTGTTGTTACTTCCCT CCAAGAGGCTGGAAAAGGGCTCAGAGCTGCTGAGCAGGAACCGGAGGGTGACCCATTTCAGGAGGTGCCGGTACC AGCCTGACTAGGTACAGGCAAGCTTGTGTGGGCCCAACAGGCCCTTGGTAGAGCTGGTGCCAGATGTGGGCTCAG

1502/6881 FIGURE 1390B

MNGDSRAAVVTSPPPTTAPHKERYFDRVDENNPEYLRERNMAPDLRQDFNMMEQKKRVSMILQSPAFCEELESMI QEQFKKGKNPTGLLALQQIADFMTTNVPNVYPAAPQGGMAALNMSLGMVTPVNDLRGSDSIAYDKGEKLLRCKLA AFYRLADLFGWSQLIYNHITTRVNSEQEHFLIVPFGLLYSEVTASSLVKINLQGDIVDRGSTNLGVNQAGFTLHS AIYAARPDVKCVVHIHTPAGAAVSAMKCGLLPISPEALSLGEVAYHDYHGILVDEEEKVLIQKNLGPKSKVLILR NHGLVSVGESVEEAFYYIHNLVVACEIQVRTLASAGGPDNLVLLNPEKYKAKSRSPGSPVGEGTGSPPKWQIGEQ EFEALMRMLDNLGYRTGYPYRYPALREKSKKYSDVEVPASVTGYSFASDGDSGTCSPLRHSFQKQQREKTRWLNS GRGDEASEEGQNGSSPKSKTKVWTNITHDHVKPLLQSLSSGVCVPSCITNCLWTKEDGHRTSTSAVPNLFVPLNT NPKEVQEMRNKIREQNLQDIKTAGPQSQVLCGVVMDRSLVQGELVTASKAIIEKEYQPHVIVSTTGPNPFTTLTD RELEEYRREVERKQKGCEENLDEAREQKEKSPPDQPAVPHPPPSTPIKLEEDLVPEPTTGDDSDAATFKPTLPDL SPDEPSEALGFPMLEKEEEAHRPPSPTEAPTEASPEPAPDPAPVAEEAAPSAVEEGAAADPGSDGSPGKSPSKKK KKFRTPSFLKKSKKKSDS

GGCCAACTCCAATCCGTTCGAGGTGAAAGTTAACAGGCAGAAGTTCCAGATCCTGGGCCGGAAGACGCGCCACGA CGTGGGACTGCCCGGGGTGTCTCGCGCACGGGCCCTCAGGAAGCGTACACAGACTTTACTAAAAAGAGTACAAAGA AAGGGATAAATCCAATGTATTCAGAGATAAACGCTTCGGAGAATACAACAGCAACATGAGCCCCGAGGAGAAGAT GATGAAGAGGTTTGCTCTGGAACAGCAGCGACATCATGAGAAAAAAAGCATCTACAATCTAAATGAAGATGAAGA ATTGACTCATTATGGCCAGTCTTTGGCAGACATCGAGAAGCATAATGACATTGTGGACAGTGACAGCGATGCTGA GGATCGAGGAACGTTGTCTGCTGAGCTGACTGCCCCACTTTGGAGGAGGCGGTGGGCTCCTTCACAAGAAGAC TCAACAGGAAGGCGAGGAGCGGGAGAAACCGAAGTCCCGGAAAGAGCTGATTGAAGAGCTCATTGCCAAGTCAAA AGAAATTCAGACTCTCCTGTCCCACAAAACTCCCAAGTCAGAGAACAGAGACAAAAAAGGAAAAAACCCAAGCCCGA TGCATATGACATGATGGTTCGCGAGCTTGGCTTTGAAATGAAGGCGCAGCCCTCTAACAGGATGAAGACGGAGGC TGAGGATGAAAATGTTAAGAAACCAAAACATATGTCAGCAGATGATCTGAATGATGGCTTCGTGCTAGATAAAGA TGACAGGCGTTTGCTTTCCTACAAAGATGGAAAGATGAATGTCGAGGAAGATGTCCAGGAAGAGCAAAGCAAGGA ${\tt AGCCAGTGACCCTGAGAGCAACGAGGAAGAAGGTGACAGTTCAGGCGGGGAGGACACAGAGGAGGAGCGACAGCCCCC}$ AGATAGCCACTTGGACCTGGAATCCAACGTGGAGAGTGAGGAAGAAAACGAGAAGCCAGCAAAAGAGCAGAGGCA GACTCCTGGGAAAGGGTTGATAAGCGGCAAGGAAAGGTGGGAAAAGCTACCAGAGACGAGCTGCCCTACACGTT GGAGAGAATTCAGAAGTGCAACCACCCGAGTCTCGCAGAAGGAAACAAAGCAAAATTAGAAAAACTGTTTGGCTT CTTATATCATCTTTGCCAGATGTTTCCTGAATCTGCAAGTGACGCTATCAAATTTGTTCTCCGAGATGCGATGCA GCTCACCAAGTGCCCCATCCTGTCCCTCCAGGACGTGGTGAAGGGCCTGTTCGTGTGCTGCCTGTTCCTGGAGTA TGTGGCTTTGTCCCAGAGGTTTATACCTGAGCTTATTAATTTTCTTCTTGGGATTCTTTACATAGCAACTCCAAA CAAAGCAAGCCAAGGTTCCACTCTGGTGCACCCTTTCAGAGCGCTTGGGAAGAACTCGGAACTGCTCGTGGTGTC GTACGGGTCCCTGCCATCCTCCACGCCATCATGGGGCCTCTCCAAGCCCTCCTCACGGATCACCTGGCGGACTG GCCGCTGACCTGTGAGAAGAGCAAGCCTGTCCCACTGAAGCTTTTCACACCCCGGCTGGTCAAAGTCCTCGAGTT TGGAAGAAACAAGGCAGTAGTAAGGAGGAACAGGAAAGGAAGAGGCTGATCCACAAACACAAGCGTGAATTTAA AGGGGCCGTTCGAGAAATCCGCAAGGACAATCAGTTCCTGGCGAGGATGCAACTCTCAGAAATCATGGAACGGGA TGCGGAAAGAAGCGGAAAGTAAAGCAGCTTTTTAACAGCCTGGCTACACAGGAAGGCGAATGGAAGGCTCTGAA GAGGAAAAAGTTCAAAAAA<u>TAA</u>ATTACATTTTATAAATAAGGCAAGGAACTGGACATTACCTCACATCTGCAATT CCAACCCTCTGGGAGGCCAAGGCAGGAAGATTGCTTCAGCCCAGGAGTTCGAGACCAGCCTGGGCAACACAGGAA AGGCTGAAGCAGGAGGACTGCTTGAGCTGAGTCCAAGGTTACAGTGAGCCGTGATTGAGCCACTGCACTCCAGCC GGCTGGAGTGCAATGGCACAACCTCCACCTCCTGGGTTCAAGCGATTCTCCTGCCTCAGCCTCCCGAGTAGCTGG GATTACAGACATGTGCCACCACGCCCAGCTAATTTTGTATTTTTAGTAGAGACGGGGTTTCTCCATGTTGGTCAG GCTGGTCTCGAATTCCCGACCTCAGGTAATCCACCTGCCTTGGCCCCCAATTATAGGTGTGAGCCACAGCACCC $\tt CGGGAATGGTCTGTGTTATCAGCTGCGACTGGTTCACTGCGTCTGGACAAGCCTCATGGGGACTGGGGATTCT$ GGCCAGTGTAATTTCTGTCAACCACGGACGTTTGCCTTCATGTGTAGAATTTACTGTTGTTATGCAAATTATATT TTCAATTATAAATG

MAKAKKVGARRKASGAPAGARGGPAKANSNPFEVKVNRQKFQILGRKTRHDVGLPGVSRARALRKRTQTLLKEYK ERDKSNVFRDKRFGEYNSNMSPEEKMMKRFALEQQRHHEKKSIYNLNEDEELTHYGQSLADIEKHNDIVDSDSDA EDRGTLSAELTAAHFGGGGGLLHKKTQQEGEEREKPKSRKELIEELIAKSKQEKRERQAQREDALELTEKLDQDW KEIQTLLSHKTPKSENRDKKEKPKPDAYDMMVRELGFEMKAQPSNRMKTEAELAKEEQEHLRKLEAERLRRMLGK DEDENVKKPKHMSADDLNDGFVLDKDDRRLLSYKDGKMNVEEDVQEEQSKEASDPESNEEEGDSSGGEDTEESDS PDSHLDLESNVESEEENEKPAKEQRQTPGKGLISGKERAGKATRDELPYTFAAPESYEELRSLLLGRSMEEQLLV VERIQKCNHPSLAEGNKAKLEKLFGFLLEYVGDLATDDPPDLTVIDKLVVHLYHLCQMFPESASDAIKFVLRDAM HEMEEMIETKGRAALPGLDVLIYLKITGLLFPTSDFWHPVVTPALVCLSQLLTKCPILSLQDVVKGLFVCCLFLE YVALSQRFIPELINFLLGILYIATPNKASQGSTLVHPFRALGKNSELLVVSAREDVATWQQSSLSLRWASRLRAP TSTEANHIRLSCLAVGLALLKRCVLMYGSLPSFHAIMGPLQALLTDHLADCSHPQELQELCQSTLTEMESQKQLC RPLTCEKSKPVPLKLFTPRLVKVLEFGRKQGSSKEEQERKRLIHKHKREFKGAVREIRKDNQFLARMQLSEIMER DAERKRKVKQLFNSLATQEGEWKALKRKKFKK

1506/6881 FIGURE 1394A

CCCTCCGGCTCGGCGAAGCAGGGAAGGGGAGAGAAGCAGGAGTCGGGAGACTGCACAGGCCAGAAAGTCTGCGGA GCGGGCCGCCCTGGCCCGCCCGGGCTCCAAGTCCCGCGTCGCCGCCCTGGCGGGACGGTGCAGCAGGCGGC GGGATGCGGCGGGCGGCAGCCTGAGCGCCCCGGATGCCCCGCGGGGGGGCGGCCTGCAAGAGCGACGCGCGGCT CCTCGGCCTCGGCCTTTGGCTTGGCTGCCGCGGGCCGCCAGCGCACGCGACACCAGAAAGACGACACTCAAAA TCTGCTCAAGAATTTGGAGTCTAATGCGCAGACCCCCTCGGAAACTGGCTCCCCATCAAGGAGGAGGAAGAGAGA AGTGCAGATGTCGAAGGACAAGGAAGCTGTTGATGAATGTGAGCCGCCTTCCAACAGCAATATCACAGCATTCGC CCTGAAGGCCAAAGTCATCTACCCCATCAATCAGAAGTTCCGGCCTCTGGCCGATGGCTCCTCCAACCCGTCTCT GCATGAAAACTTAAAGCAGGCTGTTTTGCCACACCAGCCGGTAGAGGCCTCTCCTTCCAGCAGTCTGGGGAGCCT GAGCCAGGGTGAGAAGGACGACTGCAGCTCCTCATCCAGCGTCCACTCGGCCACCAGCGATGACAGGTTTCTCAG CCGCACCTTCCTCCGGGTGAACGCCTTCCCTGAAGTGCTGGCCTGCGAGAGTGTAGACGTTGACCTGTGTATCTA CAGCCTTCACTTAAAAGACCTGCTGCATTTGGACACGGCACTGAGGCAGGAAAAGCATATGATGTTTATTCAGAT TTTTAAAATGTGCCTCCTTGACCTTCTTCCTAAAAAGAAGTCAGATGATGAATTATACCAGAAGATCCTTTCAAA ACAAGAAAAGATTTGGAGGAACTAGAAAAGGGACTTCAGGTCAAACTGTCAAACACAGAAATGTCGGGGGCTGG GGAAGCTTTCTGGAAACAGATGGCAAATATCCAGCACTTTCTTGTGGACCAGTTTAAGTGTTCCAGCTCCAAAGC CCGACAGCTGATGATGACTCTGACGGAAAGAATGATTGCAGCCGAAGGGCTATTGTGCGATTCTCAGGAGCTGCA GGCTCTGGACGCCCTGGAGAGGACGATGGGGCGGGCGCACATGGCAAAAGTGATTGAGTTTCTGAAGCTGCAAGT CCAGGAGAGACCAGGTGCCGGCTGCCATCTCCCACGGCCTGGAGCTGCTGGTGAGGGGAAGCTGTC CGGGCGGCAGAAGGAGCTGCTCACGCAGCAGCACAAGGCCTTCTGGCAGGAGGCAGAGCGCTTCAGCCGGGA GTTTGTCCAGCGAGGCAAAGACCTGGTCACGGCGTCTCTGGCTCACCAGGTGGAGGGAACGGCAAAACTCACGCT GGCCCAAGAGGAGGAACAGAGAAGCTTCCTGGCTGAGGCCCAGCCGACTGCTGACCCGGAAAAGTTTCTCGAGGC TTTTCATGAGGTCCTGGAGAGGCAGAGGCTGATGCAGTGTGACCTGGAGGAAGAGGAGAATGTCAGAGCCACCGA GGĆTGTGGTTGCACTCTGCCAGGAGCTGTACTTCAGCACCGTGGACACTTTCCAGAAGTTCGTGGATGCCCTGTT CCTTCAGACGCTCCCTGGCATGACTGGCCTCCCCCCGGAAGAGTGTGACTACTTGAGGCAGGAAGTCCAGGAGAA CGCTGCCTGGCAGCTGGGGAAGTCAAATCGCTTCCGGAGGCAGCAGTGGAAACTCTTCCAGGAGCTCCTAGAGCA AGACCAGCAGGTGTGGATGGAGGAGTGTGCGCTGTCCAGCGTGCTGCAGACACCCTGCGGGAGGACCACGAGGG CACCATCCGCGGCGTCTTGGGCCGACTGGGCGGCCTCACTGAAGAGTCCACGCGGTGTGTCCTGCAGGGGCATGA CCTGCTGTTGCGCTCAGCCCTCCGGAGGCTGGCACTCCGCGGCAACGCCCTGGCCACCCTGACGCAGATGCGGCT ATCGGGGAAGAGCACCTCCTGCAGGAGCTGCGGGAACAGCGTGCACTGGAGCAGGGGTCCTCCCAGTGCCTGGA CGAGCATCAGTGGCAGCTGCTCAGGGCCCTGGAGGCGCTGTGCTGGAGGAGGCCAGCCGGCTAGAGGAGGAAGC ACAGCAGACACGGCTGCAGCTCCAGCAGCGGCTCCTGGCCGAGGCCCAGGAGGTGGGGCAGCTTCTGCAGCAGCA GGATGACTTCAAGAGGACACTGATGGAGGCGGCAGTGGAGAGCGTCTACGTGACCAGCGCTGGTGTCAGCCGCCT GGTGCAGGCGTATTACCAGCAAATCGGAAGGATCATGGAGGACCACGAGGAGAAAACTGCAGCACCTGAAGAC CCTGCAGGGTGAGAGGATGGAAAATTACAAACTGCGGAAAAAGCAAGAACTCAGCAACCCTTCGTCGGGCAGCAG GACGGCAGGTGGCGCTCATGAGACCTCCCAGGCGGTCCACCAGAGGATGCTGTCCCAGCAGAAGAGGTTCCTGGC CCAGCTGGAGACCCAGCTACAGGAAGCTGAACAGAACTTCATCTCCGAGCTGGCAGCCTTGGCCCGAGTGCCCCT TGCTGAAAGCAAACTGTTGCCTGCTAAGCGTGGGCTGCTAGAGAAGCCCCTAAGGACTAAAAGGAAGAAGCCCCT GCCCCAGGAAAGAGGGGACCTGGGGGTGCCCAACAATGAGGACCTTGCCTCCGGGGACCAGACCTCAGGCTCACT AAGCAACTTGTAGTTTAAGACCAGTCGGTGGGACAAGACCTGAAGCCCTGGGTCTGGGTGTGAATTCCACCTTCC CTCCTGCAGTGCTGAGAGGCAGCGAGGACGGAGAGGACAGCGGCATCTCTAGGCTCTTCTGAGAGGGACAGAGAA AGAATAGAAATGTGCCCTAAAAGCATAAATGAGTATCACCTGAGAAAATTAGGCATTCCCGTCTTGGAAACACGT CTCTGTGAGTTTGCATTTCATTTGGCTTGGAGCCCTGGCTCGATGCCTCATGGATCTTTCTCCCCAAGGAGGGAC GTCTTGAGGGGTCCGAGCCTCAGGCCAAGGACCCCTGATGCAGACTCTGGAATCCCTGGCCCAAAGGCCTGTCTG GGCCCATCTGGGGCTGAGGACACAGATACATAATGACACCTGCAGAAATGTATTCTCTGAGGACACTTAGAAT

1507/6881 FIGURE 1394B

ATGAGGAAGAGGGTGTGGCCCAACCCTCACTTCACCTGGGGAGGGGCTTCTTCCGGACAGTAGACACCCTGCCCG TGCAGAGAGATGTCATGGGGGCACCTGCTCTCCCTGATAGATGCTGAGAGCATCCAGAAACTTCCAGACCAGCCC TCTCACCACACCCAGAAGAGGCCTTTCCCATCTGGAGAGAGCTTCCAGACCAGCCCTTCACACACCACAGCCAG GAGGGGCCTTTCCCACCTGGAGAGAACTTCCAGACCAGCCCTCATACCACAGCCAAGAGGGGCCTTTCTCACC TGGAGAGAAATTTCCAGACCATCCCCTCTCACCACAGCCAGGAGAGGCCTTTCCCACCGGTAGAGAAACTTCCAG ACCAGCCCTCACACCACAGCCAAGAGAAGCCTTTCCAGCCTGGAGAGAACTTCCAGACCAGCCCTCTCACTAC AGCCAGGAGAGGCCTTTCCCGCCTGGAAACTTCCGGACAAGCCTCTCACACACCACAGCCAGGAGAGGCCTTTCC CACCTGGACAGAAACTTCCAGACCAGCCCCTCTCACCACAGCCAGGAGAGGCCTTTACCACCTGGAGAGAAGCTT CCAGACCAGCCCTCACACCACCAGGGGGGGGGGCCTTTCCCACCTGGAGAGAAACTTCCAGACCAGCCCCTCAT ACCACAGCCAAGAGGGGCCTTTCTCACCTGGAGAGAAACTTCCAGACCAGCCCCTCACACCACCCGCCAGGAGAGG CCTTTCCCACCGGGAGAGAAACTTCCAGACCAGCCCTCACACCACAGCCAGGAGAGGCCTTTCCCACCGGGAGA GAAACTTCCAGACCAGCCCTCTCACTACAGCCAGAAGAGGCCTTTCCCACCGGGAGAGGAACTTCCAGACCAGCC CCTCACACCAGAGCCAGGAGAGGGCCTTTCCCGCCTGGAGAGAGCTTCAGGCCAGCTCCTCACACCACAGCCAGG AGAGACCTTTTCTGCCTGGAGAGAACTTTCAGACCAGCCCCACACACCACAGCCAGGAGAGGCCGTTCCTGCCT GGAGAGAAGCTTCCAGACCAGCCCTTCACACCACAGCCAGGAGAGGCCTTTCCCACCTGGAGAGAAACTTCCAGA $\tt CCAGCCCTCTCACCACAGCCAGGAGAGGCCGTTCCCACCTGGAGGGAAAATTGCTCCTTTGATGGAGGTTAGGG$ ACTGTCACCCTCAGCACTGTGAACATACCGGGCGAGATCATTCTTCAGGGGAAGGAGCTGCCCAGAGCATCACAG GATGTTCCAGTGTCCCTGGTCTCTGCCCACCAGATGCCAGCACTCCCACCATTCGTGGCAACCAAGGATGTCTCC AGACACTGCCCCGTGTCCATGGGGTTATCACCCACTGTGCTGAGTCAAAGGGTGCCTTGCCCTGGTCTAATCCAG GACATAGCCGTGGATACGTCCAAAAATCCCCAGAACCTAGTGAGCCCTCTGGCTCTGGGAGCCCCTATCTCAGGA ATTTTCAGGGTCATTTGTGACTTTTCATTTCTTAAAACCTGAAATAGACTCTCTTAGAAACAAGTGACTCCTTCC CAGTGGCCAAAACTTAATCATCAGAGCGCTTCCTTCAGTTCCTCACCCATCAGCCAGTGGGCTCTCCAAAGTTAA CCAACAGCTCCCTCTTGTGGTTCACTAAAAAACTTGGTTATTCCATGGAGTTGTGCAAAGCTATGGCTTCCTTGG TGCAATATTCTTAAAACCTGCTTTGCATAGAAATCACTTTTGCCCAGGCTGGAGTGCAGTGGCGTGATCTCGGCT CATGGCAATCTCCATCTCCCGGGTTCAAGCGATTTTCCTGCCTCAGCCTCCCCAGTAGCTGGGACTACAGACGTG CTCTCGAACTCCTGACCTCATCGTCCACCTGCCTCGGCCTCCCCAAAGTGCTGAGATTAGGCGTTAGCCACCGCG CCCGGCCAGAAATCACTTTTATATTGTCACATGGGCCCTCTGCACAGAGTCCGATGGCTCCTCCCGGGGAAGCCT GATTTTGTGACGTGTGTATAGTAAATGCAGGCCCTCTGGCAGCACCATAATTGGTCGGTTACCCTGAGCCCAGAG CTCTGAAAGCATCTGTGGAATGATCACGGGACCCTTCTCCTCTGAGAAGGCTCCCGGCTGCCTCCCCGCCACCGA GCTTGTAGCCTGAATGCCTGGCTGTCGCATGGAGCATTTTGCTTCTGGGGTGTCTTCCTTAGCCAAAGGGAACGT GTCATTTGCTCGACCCTGGCCCACCCTTGCCGCCCAGCTGTTGTGCTGGGCACAGTCTGGGGCACAGGCCTCCAT GATGAAGACGCGTGGGCTGTCGGTGCTTTCATCCGTCACAAACTGGCACCTGTACCTGCCAGCAGGAGCATGATG GGGACTTCCATGCTGGAATTGCTCCCTGATTAAAATGAGATATGGCTATTTGGAAGACACTGCATTTTAGCCAGT GTACCTGGGCACAGACTCGGGGCTGCCCTGAAGCTGATGAAGGCTTGAAGGACGGAAGGGCTGAGCCACATGAAG GCAGCACTCAGGGCCAGGGGAGAGAGAGAGAGATCAGCAGTGCAGCCCCAGGATGCCTCGCAGACGTGCCTTCTG CCATGATTGTGAAGTTCTAGCCACGTGGAACTCTCTCGGAAGAACTGGTTGTTAAAGAGCACCTCTGCCTTCTTC CTCTGTTGCCATGTGATCTCTGCACACGCTAGCTCTCCTTCGCCTTCTGCCATGCTGGAAGTAGCCTGAGGCCCT CACCAGAAGCAGACGCTGGCACCGTGCTGCTTGTACAGCCTGCAGAGCCGTGAGCCAAGTAAACCTCTTTAATTA TCTTCAAAGACGATCTTGCCCTGGCTGATGACCACTAGTGGGGAGCCGTGGCACTCCATACCCTCGAAGATGTTG TACTCCACCGCCTGCACCAACAGCCTCAGCGTTACTTCCCAGGATTTGCTCTGCCCCAAACGAGCTGTTCATAAC TGTAATATTCCACTGTATGGTCCACAGTGTATATAACCAACAACTCACCGTTGCGCATGTAGGCTGCCGGTGGCT TTCTATAATCAAATCAATATTGTTCTGGGGCATCACAAAGAGGGAAGGGGGTCCCCCXGGGGTTATGCAATGTGGC TTTTTCTCTAGGTT

MARGGAACKSDARLLLGRDALRPAPALLAPAVLLGAALGLGLGLWLGCRAGRQRTRHQKDDTQNLLKNLESNAQT
PSETGSPSRRRKREVQMSKDKEAVDECEPPSNSNITAFALKAKVIYPINQKFRPLADGSSNPSLHENLKQAVLPH
QPVEASPSSSLGSLSQGEKDDCSSSSSVHSATSDDRFLSRTFLRVNAFPEVLACESVDVDLCIYSLHLKDLLHLD
TALRQEKHMMFIQIFKMCLLDLLPKKKSDDELYQKILSKQEKDLEELEKGLQVKLSNTEMSGAGDSEYITLADVE
KKEREYSEQLIDNMEAFWKQMANIQHFLVDQFKCSSSKARQLMMTLTERMIAAEGLLCDSQELQALDALERTMGR
AHMAKVIEFLKLQVQEETRCRLAAISHGLELLAGEGKLSGRQKEELLTQQHKAFWQEAERFSREFVQRGKDLVTA
SLAHQVEGTAKLTLAQEEEQRSFLAEAQPTADPEKFLEAFHEVLERQRLMQCDLEEEENVRATEAVVALCQELYF
STVDTFQKFVDALFLQTLPGMTGLPPEECDYLRQEVQENAAWQLGKSNRFRRQQWKLFQELLEQDQQVWMEECAL
SSVLQTHLREDHEGTIRGVLGRLGGLTEESTRCVLQGHDLLLRSALRRLALRGNALATLTQMRLSGKKHLLQELR
EQRALEQGSSQCLDEHQWQLLRALEARVLEEASRLEEEAQQTRLQLQQRLLAEAQEVGQLLQQHMECAIGQALLV
HARNAATKSRAKDRDDFKRTLMEAAVESVYVTSAGVSRLVQAYYQQIGRIMEDHEERKLQHLKTLQGERMENYKL
RKKQELSNPSSGSRTAGGAHETSQAVHQRMLSQQKRFLAQFPVHQQMRLHAQQQQAGVMDLLEAQLETQLQEAEQ
NFISELAALARVPLAESKLLPAKRGLLEKPLRTKRKKPLPQERGDLGVPNNEDLASGDQTSGSLSSKRLSQQESE
AGDSGNSKKMLKRRSNL

FIGURE 1396

ACGGGCGCCGAGCCTCCGTGCTCTCTATCCCTCCCGGGCCTTTGTCAGCGCGCCCGCTGGGAGCGGGGCCGA ${\tt GAGCGCCGGTTCCAGTCAGACAGCCCCGCAGGTCAGCGGCCGAGGGCCGAGGGGCCCAGAGGGGGCCC} \underline{{\tt ATG}} {\tt TCGTACC}$ AGGGCAAGAAGAGCATCCCGCACATCACGAGTGACCGACTCCTCATCAAAGGTGGACGGATCATCAACGATGACC GAGTGAAGACCATTGAAGCCAACGGGCGGATGGTTATTCCCGGAGGTATTGATGTCAACACGTACCTGCAGAAGC TCATTGACCATGTTGTTCCTGAACCTGGGTCCAGCCTACTGACCTCTTTCGAGAAGTGGCACGAAGCAGCTGACA TGCTGGTGCAGGACAAAGGCGTCAATTCCTTCCAAGTCTACATGGCCTATAAGGATGTCTACCAAATGTCCGACA GCCAGCTCTATGAAGCCTTTACCTTCCTTAAGGGCCTGGGAGCTGTGATCTTGGTCCATGCAGAAAATGGAGATT TGATAGCTCAGGAACAAAAGCGGATCCTGGAGATGGGCATCACGGGTCCCGAGGGCCATGCCCTGAGCAGACCTG AAGAGCTGGAGGCCGAGGCGGTGTTCCGGGCCATCACCATTGCGGGCCGGATCAACTGCCCTGTGTACATCACCA AGGTCATGAGCAAGAGTGCAGCCGACATCATCGCTCTGGCCAGGAAGAAAGGGCCCCTAGTTTTTGGAGAGCCCA TTGCCGCCAGCCTGGGGACCGATGGCACCCATTACTGGAGCAAGAACTGGGCCAAGGCTGCGGCGTTCGTGACTT GTGTCAACGGGATAGAGGAGGGGTGACGGTCGTCTGGGACAAGGCGGTGGCTACTGGCAAAATGGATGAGAACC AGTTTGTCGCTGTCACCAGCACCAATGCAGCCAAGATCTTTAACCTGTACCCAAGGAAAGGGCGGATTGCCGTGG GCTCGGATGCCGACGTGGTCATCTGGGACCCCGACAAGTTGAAGACCATAACAGCCAAAAGTCACAAGTCGGCGG TGGAGTACAACATCTTCGAGGGTATGGAGTGCCACGGCTCCCCACTAGTGGTCATCAGCCAGGGCAAGATCGTCT TTGAAGACGGAAACATCAACGTCAACAAGGGCATGGGCCGCTTCATTCCGCGGAAGGCGTTCCCGGAGCACCTGT ACCAGCGCGTCAAAATCAGGAATAAGGTTTTTGGATTGCAAGGGGTTTCCAGGGGCATGTATGACGGTCCTGTGT ACGAGGTACCAGCTACACCCAAATATGCAACTCCCGCTCCTTCAGCCAAATCTTCGCCTTCTAAACACCAGCCCC GAGCTAGCCTGAAGGATTCTGGGAATCATGTCCATCCCTTTTCCTGTCAGTGTTTTTGAAACCCACAGTTTTAGT TGGTGCTGATGGAGGGAGGGGGAAGTCGAAGGATGCTCTTTCCCTTTTCTGTTTAGGAAGAAGTGGTACTAGTGT GGTGTGTTTGCTTGGAAATTCCTTGCCCCACAGTTGTGTTCATGCTGAATCCACCTCGGAGCATGGTGTTTTCAT TGATTCTCTGAGTGGTGGTTCCTTTGCACCCTGTAGATGTTCTAGGATAGTTGATGCATGTTACTAAATTACGTA TCGCCCCACCTCCACCTGTGAGATCCGTGAATTCTCGGAATGGCAGGGGAAGCCTTGCACTAGGTTGCAGAGAAG CATCCTCCACATCCTGTGTCAGAAACCCTGGTCTCCGTGGCACTTGTAACTCACCGTGCTGTCTTCTGGTCTGTG TGTGTTCTTCAAGCCAGCTCTAGGCTTCAGGCCGAGCCAGGTTCACACTCAGAAAGAGGTCTCCCCATCCCCATT CGGGGCTGACGATGGGGGGCTGATGGCTGCCCCTGCGTGGCCTGAGTCCTGGTCCCTCTGAGGCAGTTGACGGGG AAA

FIGURE 1397

MSYQGKKSIPHITSDRLLIKGGRIINDDQSLYADVYLEDGLIKQIGENLIVPGGVKTIEANGRMVIPGGIDVNTY
LQKPSQGMTAADDFFQGTRAALVGGTTMIIDHVVPEPGSSLLTSFEKWHEAADTKSCCDYSLHVDITSWYDGVRE
ELEVLVQDKGVNSFQVYMAYKDVYQMSDSQLYEAFTFLKGLGAVILVHAENGDLIAQEQKRILEMGITGPEGHAL
SRPEELEAEAVFRAITIAGRINCPVYITKVMSKSAADIIALARKKGPLVFGEPIAASLGTDGTHYWSKNWAKAAA
FVTSPPLSPDPTTPDYLTSLLACGDLQVTGSGHCPYSTAQKAVGKDNFTLIPEGVNGIEERMTVVWDKAVATGKM
DENQFVAVTSTNAAKIFNLYPRKGRIAVGSDADVVIWDPDKLKTITAKSHKSAVEYNIFEGMECHGSPLVVISQG
KIVFEDGNINVNKGMGRFIPRKAFPEHLYQRVKIRNKVFGLQGVSRGMYDGPVYEVPATPKYATPAPSAKSSPSK
HQPPPIRNLHQSNFSLSGAQIDDNNPRRTGHRIVAPPGGRSNITSLG

FIGURE 1398A

TTTCTCCTTGGACCAAGATGACTGATGGAAAACTCTCCACCTCTACAAATGGCGTAGCCTTCATGGGTATTCTGG ATGGTCGACCAGGAAACCCCCTTCAGAACCTGCAACACGTCAATCTCAAGGCGCCCCGACTCCTCTCCGCGCCTG AGTACGGGCCCAAGCTGAAACTCAGGGCTTTAGAAGACCGGCACAGCCTCCAGTCCGTGGACTCGGGGATTCCTA TCATCCCCGAGCGGGCCTTCCAGAGCGCCTGCGCGCTGCCATCCTGTGCGCCACCAGCTCCTAGCAGCACCGAGC GGGAACAGAGCGTGCGCAAATCCTCCACGTTTCCCAGGACAGGCTATGACTCGGTAAAGCTCTATAGCCCGACCT CCAAAGCCCTGACCCGCAGCGATGATGTCTCCGTCTGCAGCGTGTCCAGTCTTGGGACAGAGCTGTCCACCACGC TGTCCGTCAGCAATGAGGACATCTTGGACCTTGTGGTCACGAGCAGCTCCAGTGCCATTGTGACCCTGGAGAATG ACGATGACCCACAGTTTACCAACGTCACCTTGAGCTCTATCAAGGAAACCCGTGGCTTACACCAGCAGGACTGTG CTAGAAAACAAAGTGCAAGGCTTGACAAACACAATGACTTGGGATGGAAGTTATTTGGGAAAGCGCCACTCCGAG AGAATGCCCAGAAGGATTCAAAGAGAATACAGAAGGAATATGAAGACAAGGCTGGAAGACCTAGCAAGCCACCCT CTCCAAAGCAGAATGTGAGGAAGAATCTTGACTTTGAACCACTTTCCACCACCGCACTCATCCTCGAGGACAGAC TTGGAAACGCTGTGCTCACCTGGAATAATGAGATCTTACCTAACTGGGAAACAATGTGGTGCTCTAGAAAAGTTC GAGATTTATGGTGGCAGGGAATCCCTCCAAGTGTGAGAGGCAAAGTCTGGAGCTTAGCCATTGGCAACGAGTTAA ATATCACCCACGAGCTCTTTGACATCTGTCTTGCCCGAGCCAAGGAGAGGTGGCGGTCCCTTAGCACAGGAGGCT TTTCTAGAACATTTCCTAATCTCTGCATTTTCCAGCAAGGTGGTCCATATCATGACATGTTGCACAGTATTTTGG GCGCTTATACTTGTTACCGGCCAGATGTGGGTTATGTCCAGGGCATGTCCTTCATAGCAGCAGTGTTGATCTTGA ACTTAGATACTGCAGATGCCTTTATTGCCTTTTCTAACCTTCTGAATAAACCCTGTCAAATGGCGTTTTTTAGAG TGGACCATGGCCTTATGTTGACTTATTTTGCTGCATTTGAAGTATTCTTTGAAGAAAATTTGCCGAAATTATTTG TGCCCCTCGACCTGGCCTGTCGTATCTGGGACGTGTTCTGTCGCGATGGGGAAGAGTTCCTGTTCCGCACGGCCC TGCCCGAGGACCTGCCCGCCGAGGAGCTGTTTGCCTCCATCGCCACGATCCAGATGCAGAGCCGAAACAAGAAGT GCTGCAGCGGGAATTCGCACTCGGCACCAATCAGAGCCCCATGCCGCGCCCCTCTGTTGTTTCAGACTGACACC AAAAACTTTTAAAGAATTAAACCAAGGCTTAGCCTTAAGCAGCTCAGTGGAAGGATGAGCTGCTGCGGACCACAG CCAGCCACTGCATCTGCTGCACAGTTGAACGATGGGCAGTGGCTCACCCCCACTCCTTTATTTCAGCAAAAGCTA ATTAAATTGTAATGTTTCTATGTCAACTACTGGGAAGTATGTTACAGTCTTAGCCAGGATGCATGAGAGATGTTA TTTGGGAGACTTGAGATGCTTTGGCTGATATTTACATGTTTTCGATAAGAAAGGGATCGCTGATTGAGTTATTGA GATAGTTTTTCCAGAGCTGGAGGTCACGTTTCTAAAACTCACCTACGAAAGATAGCATTAAAAGGAACAGGGGCTC TCTGAGGATGGCCACTGATGTGTTTTGTGGATACCTGGGCATCGACCCAGCCTGCAGGTGAGCTCTGGGCCATG TTGCCTTGACACAGTCACAGTGTAGAGGCTGCAGGTGCACACGTGGGCTCCAGTGGGACTGCGCTCTGGGAGACT GCTCCCTGGCATCGGTCCTGCGGAGGTGGAAAGTTCGAGAGGAGGAGCTATTTGCGAGGAAGCCCTGTGGCAATA GTGGCTGGGCCCTCTCCCACCTGCCTGTTCAGTGGAGGCCAGGGCAGCAGCCCAGAACAGCACATGTGGGGGAGG TGGCCCCTTGTGCCAGCAGTGGCTCCTCTCTGCCTTTGAGCCCTGCACAGCTGGACCCATCCTAAGTGCCAGTGA TAACAGCCTAGACAATCTCGTCAGATGCTCATACTGGACCATCAGCCTCCCCATTTTAGCTGACTTTCCCAGGGT CGTTGGCAAATTTTTTGTTCTGTCTTTTCCTTGACTAATTGTAGAACTTTGTGTGAGGACTTTGGTTATCCAAAA TCACAGAAATGAACCGTTTTGCAGCTGCGCAGTCTAAAGGGCCAGGCCAGTGTCTGGAAGCAGGGCCCACGTGGCG GTCCGCTGGCAGGCTGGTCCTGGGGAGCATTCTGCGGACCCGGTCACGGGCTTGGTTAGTCATGCGTACATGTGT GCCTTGGGGTGCTCTGCACTCCACGGCCCTTCTCAGCCACACTTCCCACCCCAGGGGGGTGCCCCCAGGCTGATCT CATTTCTGATGTTGAGGGCTGTTTGGCTCTGTATAGCTTGTAACAGGAGCCTTGGGCTAGGGGCAA

FIGURE 1398B

GCAGGTTGCTGAGCCAGTGGCTGCCCGTGCCCTCTTCCCAGCACTATCATGTGTCACGTTTCCCGGACTCTGC ${\tt CCCTACATCTCAGCTGAATCTCCAGGGAGGCTGCAGAGCATCGTGGAGACCACTTTCTGCCTCGGCCTTTAAATG}$ CTGACTCACCTCCTCTGGAGGAGGCGTCCTGTCTTCACGGGGGGGTCCCGGTGGCCTCCAGACGTAGCCATTTC CTGACATCAAGATGTTGAATGTAATCTGGTCTGAGCTGGGCCTGTGGGAGGGGCCGCCTGAGGCCTGTGCGCTGT TGTCCTCGCAGATGTACTTATTTTTGTTCATGATACGGGCGTTCCGTTCCTTAAAGATGTATATTTTCTTACT GTACATAAAGATGTTCCTTAAGTCGTACAGAAGGTGGCGCGCAAAGGGCCTCGTGCAGTGTGTTCAGATTGCCC CTGGGGATCTTCTGTGTCTTCAGCGCCCAGCCCTGCGTGTTCCTGGTGAAGCAGTTTCACATCAGTCTCTCCAGA TAGCACTACGATGTATTCCGCTTCTGAACAGGATCCCATGCCAGTGTGGAACACCTTCCCAATCTTAGTTCAGAA GTGGCTTGTATGACCTGTTCAGGGGTCACATGAGGTCTCGCCAGTTTCCTGGGTCCTCTTCAGAGGCCAGAAAGT TCTAAGTTCTGAGTCCCCGGCCAGGGTCCCTTAACACCTCGGCACAGAGGCTGTTGGCAAGTGTAGAGGCTGCCT CTGTGTGTGTGTTAAGTAAACTGGAAATGAGACATTGACGTGCTCCTCCAGAGGTCTGCACACTCCACTTCA CATGCCGTTGACTCTCACAGTCTAAGACTTCAGGGCCGGGACCTTTGTCCAGCCTGCACAGTAGAGTGAGGCTGC CTCTCCCGCCAGGCATTGGGATCCCATTTAGAAACGGCATTCACTTCAGAAGGTACTTTTTAACTGCTCAGTTTT TGACTATTTTAAATAGTTTGCTGAAAACTCCTGATAACACTTGCTACATATCATGTTTTAATTGCTTGTACAGTT AACCTTTAATTTTATTTAGTAAAGTGTATCAAAGTAGGACTTTTTTTGAATTGTAAATAGGTGGTTTTATTAAATA AAAGTCAATGTAAAATTGTT

MTDGKLSTSTNGVAFMGILDGRPGNPLQNLQHVNLKAPRLLSAPEYGPKLKLRALEDRHSLQSVDSGIPTLEIGN PEPVPCSAVHVRRKQSDSDLIPERÅFQSACALPSCAPPAPSSTEREQSVRKSSTFPRTGYDSVKLYSPTSKALTR SDDVSVCSVSSLGTELSTTLSVSNEDILDLVVTSSSSAIVTLENDDDPQFTNVTLSSIKETRGLHQQDCVHEAEE GSKLKILGPFSNFFARNLLARKQSARLDKHNDLGWKLFGKAPLRENAQKDSKRIQKEYEDKAGRPSKPPSPKQNV RKNLDFEPLSTTALILEDRPANLPAKPAEEAQKHRQQYEEMVVQAKKRELKEAQRRKKQLEERCRVEESIGNAVL TWNNEILPNWETMWCSRKVRDLWWQGIPPSVRGKVWSLAIGNELNITHELFDICLARAKERWRSLSTGGSEVENE DAGFSAADREASLELIKLDISRTFPNLCIFQQGGPYHDMLHSILGAYTCYRPDVGYVQGMSFIAAVLILNLDTAD AFIAFSNLLNKPCQMAFFRVDHGLMLTYFAAFEVFFEENLPKLFAHFKKNNLTPDIYLIDWIFTLYSKSLPLDLA CRIWDVFCRDGEEFLFRTALGILKLFEDILTKMDFIHMAQFLTRLPEDLPAEELFASIATIQMQSRNKKWAQVLT ALQKDSREMEKGSPSLRH

GCTATGGCGGTGGACATCACGCTGCTATTCCGGGCCAGCGTCAAGACCGTGAAGACGCGGAACAAGGCGCTGGGA GTGGCGGTGGGCGGGGTCGATGGCAGCCGGGACGAGCTGTTCCGCCGGAGCCCCCGGCCCAAGGGCGACTTC TCCAGCCGGGCCCGCGAAGTGATTTCTCACATTGGCAAACTGAGAGATTTTCTTCTGGAACACAGGAAAGATTAT GCCCAGATATTCATGAGGACCTGTTCAGAAGCAATTCAGCAACTACGAACAGAAGCTCACAAGGAGATACATTCC CAGCAAGTGAAGGAGCACAGGACCGCTGTTTTGGATTTCATTGAAGATTACTTGAAAAGAGTATGTAAACTTTAC TCAGAACAGAGACCATCCGAGTTAAAAGAGTGGTGGATAAGAAAAGATTATCTAAGCTGGAACCAGAACCAAAT ACAAAGACAAGAGAATCCACATCTTCTGAGAAAGTTTCACAGAGTCCTTCAAAAGACTCTGAAGAAAACCCTGCC ACTGAAGAACGTCCAGAAAAATTTTGGCTGAAACACAACCTGAATTGGGAACGTGGGGAGATGGCAAAGGCGAA GATGAGTTATCCCCAGAAGAAATACAAATGTTTGAACAGGAAAATCAGCGACTAATTGGTGAAATGAACAGCTTG TTTGATGAAGTGAGGCAAATCGAAGGGAGAGTGGTTGAGATTTCCAGACTCCAAGAGATATTCACGGAAAAGGTT GAAGACATAAGAGAGGCCATTAAAAACAACGCTGGCTTCCGCGTGTGGATCCTCTTCTTCCTCGTGATGTGCTCC ACTCACAGACTGCGTGCTTTCATGTACTTCCAGTGCTGGAGCATGGTATGACCAGATTTTATCACAGTGCCATTT GAAGGGAAAGGAGTTCAGACAGACAGACGTATTCCCCAAAAAGGGATACCCCAGGCCGATGGTGTTCAGCCATTT TGCAGGAGTGGGTGATTAGCTGCTCCTTGAACTTGAGGCTGCCTTGGCAGCAGGGGCACAGCAGGCCTCAAGAGC CCCTAATTGTCTCAGGGTTCAAAGGAAGACACTGACCTTTCCCATCCCGGTAGCTTCAGGGAAGATCATAGTTAA AAAAA

MAVDITLLFRASVKTVKTRNKALGVAVGGGVDGSRDELFRRSPRPKGDFSSRAREVISHIGKLRDFLLEHRKDYI NAYSHTMSEYGRMTDTERDQIDQDAQIFMRTCSEAIQQLRTEAHKEIHSQQVKEHRTAVLDFIEDYLKRVCKLYS EQRAIRVKRVVDKKRLSKLEPEPNTKTRESTSSEKVSQSPSKDSEENPATEERPEKILAETQPELGTWGDGKGED ELSPEEIQMFEQENQRLIGEMNSLFDEVRQIEGRVVEISRLQEIFTEKVLQQEAEIDSIHQLVVGATENIKEGNE DIREAIKNNAGFRVWILFFLVMCSFSLLFLDWYDS

 ${\tt AGCTTAGAGGCAAAGTTAAGAGACTCATCAGATTCTGAGCTGCTGCGGGATATTTTGCAGAAGACGTGCTGTATT}$ AGGTCTACCTGGCCTTTACCGTCCGCAACCCAGAGACGTGCCAGCTGTTCACCACCGAGCTAGGCTGGACTGGGA TCAGATGGGAAGTGGAAGCTCATCATGACCAGAAACTGTTTCCCTACAGAGAGCACTTGGAGATGGCAATGCTGA ACCTCACACTGTAGGACTCACACGACTCCAACGGGCTTGTGAGAATTAAGTCACTCTCGTGGGAAGAATTTTT ATATGGGAAAGCGGATAAAACTTTCATTGCACTGGAATGTTTGGAAAATGTTAAATTCCAAATCAGGAACCACAA ACTGCCCTCTAATAAGACATTGGCTATCTAAGCATGTGGGTGCCCCCTTTCTGCCAGCAGTTCTGGTTCTTAAGA AAATCACCATAAATCAGACATGAAAATTCTGGCTCCAAAAATAGCATTTTCTTTGTGCAAATAAAAACGAGTGTA TCAAGTATGACGTTCCCCCAACGTGGACACACTTGTTTCCTCAGAAAGCCAAACCTGCTGCAGCTGCCACATCCC TGGACACACTCGTTTCCTCACAAAGCCAAGCCCGCTACAGCTGCCACATCCCTGGACACACTCGGTTCCTCACAA AGCCAAGCCCGCTGCAGCTGCCACATTCCTGGGCTTATGGTGCAGCAGGTGCTTTTTTCAAGACAGGAATCAAAG TGTAAGGAACATGGCAGAAAGGTGACACCTGGAGACCAAATGCAGGATGAGGAGTACTGCAGAGGTCACAGGGAA GTCACAGAACAGTAATACGCTGGCAGGGGCATGGGGCATGAAGAACAGAAGAACATTTGAGAAAAGCATCTGC AAAATACTAAAGAGCAGAGCTTACCTCATTTCCTGTCCCCACCCCATCCCAGGTCACCACCTGGCTGACCCCAGG TCCCCGACCCAACAACAACCCCTCCCAAGTCCCTAACTCCCTTACCTGGACTTGAGACCCTTCACACCCCAGCAG TGCTCCGCCTCCAACTTGACATCATGCTTTCTGGAAACTTCCCCGTGTGTCCCACTTTCCCACACTTGGTGCGCT GGAGCACCTTCCGGCCTCTACATGCTGTACGTTCCCCTGTGAGCACCCTCCTCTCGGCCTCTGGCCAACACAGTC CCACCCATCTGTGGGTAACAAGGGGGTGTGGGTGTTCTTTTCAGCCTTGCTAAACTGTCTGAATCAAGGATCACA CCAGTCTAAATGACTTCCGACCTGGACCTTTACTGAAAATCCTCCCAATCATTCTGTTGACAAGAATGATGTATT ACTTTTTGCAATAAGAAACAAGTAACATTTGCAGAATTCCACCCATCTTTCAAGGCTGGTCCCAGAAGTTCCCTT TGCCCACACCTACCTGATCCTGACAACTTCCTAAACTGCAGCCCTGCCCACCCGGCTCCAGCATCATTTGTGG AGTGTCAGCTCCATAAATCCAGAGGGCAGGTGGGGGGTGTCCTAACATTCCCGAGCCTACTGTACCGAAACGGG ACAGCAGAGTAGGCCAGCATCTGTGACTTCTGCTCCCTCACTAGCTTTTCCACCAGACCCCACATGTTACCACCC TGGCTGTGGGAAGCAGGGATCAGGGAGTGTGGCTCGGTGCCCGTCTCCAGAACCCTGCCCACCCTGGCGTGGTGG CAGACATGGTTACCTGCAGCTGAGCTGCCAGTTCCTCTGAGTCCTCAAAGACCAGGCCGTTTTCTTCATGTTTCA CTAGCTCATGTAAACTGCAGAGAACCAAGGGAGCCTGAGAGCTGCCTGGGGAAGACACCAGACCCCTGGGGTG GGTTCTTAGATTTGGCATCTGAAGCATATAAAGGTCTGGGGGAGTGCACATCAAAATGGCCAAATCAATTTGAGG AGGGAGCCTTAAGGAAGGTTTGTACGTTCTGTGCTGGATGCTCTTCAAGTACTGAAGAATTATTTTTGCATGTTT TTCTTAATTCCATGGCCATGGAACAAGTAAAGGCAACCCCCTGGGGACTGGTTCAGCACATAAAAGATGACTTTT CTAGGACACC

MAPEENAGTELWLQGFERRFLAARSLRSFPWQSLEAKLRDSSDSELLRDILQKTVKHPVCVKHPPSVKYARCFLS ELIKKHEAVHTEPLDELYEVLAETLMAKESTQGHRSYLLPSGGSFTLSEITAIISHGTTGLVTWDATLYLAEWAI ENPAAFTNRGVLELGSGAGLTGLAICKMCRPQAYIFSDCHSRVLEQLRGNVLLNGLSLEADITANLDAPG

7.

TTGTCCGTGGCTTCTCTGAGAAGAAGTTGAAAAAGGTAAAAGTTTTCAGGAATATTCGGGCTCTCTATTGCT GCCCCTGGACATCGTCGAGCTGGCGGAACCGGAGGAAGTGGAGGTGCTGGAGCCCGAGGAGGATTTCGAGCAGTT GAACCGGAGCAAGCTGTGGGAGATGGACAATATGCTCATCCAGATCAAAACGCAGGTGGAGGCCTCGGAGGAGAG CGCCCTCAACCACCTCCAGAACCCGGGCGACGCGGCCGAGGGCCGGGCCGAGAGAGGTGCGAGAAGGCCGAGGA GAAGGCCAAGGAGATTGCGAAGATGGCAGAGATGCTGGTGGAGCTGGTCCGGCGGATAGAGAAGAGCGAGTCGTC $\texttt{G}\underline{\textbf{TGA}} \texttt{GCGCGGTCGGCGGTTTCCAGCCAATGGATTCTGGTCAACTGGTGGAGATTGGCTGACACCCTGGAGAAGCC}$ GAAACCAGAGAGCCTTTTGTTTTCTCTTTTTTCCTGTCTATGCTCTGTCTCACTTAACACTACGTTTTCTGCTAT ATGCTCTCACATACAGGAATTAGGGCCTAGATTGTAAGCTCTTGCAGCAGTCACATTTGTTCCCGGGCTTTGGTG GTTATTTCTAAATTTTTGAGGTGCTTTGCTATTTCTTGTGTGACCTGATAGCTCCCTGGAACTTTGGGTCTGTGT GTGACACATGAGACTCACAGTTGGAGTTCTCCAGCTCTGGAGGTGCTGAAGGAGCTGCATTAATTCTGGAAGACG GTGAATCTGGAGAAGAGCTGGAGAATGGATAGTATTGTCTGTATTTGGAGACTTTAATTTCTGTGTGAGACCAAA GGAGGAGAGATGTGTTTGTTCAAAATTTAAATTTGTTGTGGTACACTATCTTATGTAACCTGTCTGGTGAGTTT GTTTGGACAACCTAACTCAGCTTTATTTGACATGGAACCTAAAATAGAAGATAAGATCTTGATATTCTGTACAAG TTGATGTAATACCCTGATGCGTTTTAGAGGACTTGGCATAAAATGAAAGATTGGCAAAGGCCCTTGAGGGGCTTG GGGATGACAGTATGGAACTGTCTGCATTGGACCCTAAACTGGACTAGAAGAGGCATCTTCAAGGTTCATACGTTG AAAACTTACCATGTTAATAAAAGTATTCATTTGC

 ${\tt MRPLDIVELAEPEEVEVLEPEEDFEQFLLPVINEMREDIASLTREHGRAYLRNRSKLWEMDNMLIQIKTQVEASE}\\ {\tt ESALNHLQNPGDAAEGRAAKRCEKAEEKAKEIAKMAEMLVELVRRIEKSESS}$

GGAGCCGGGCAGCCCGCTGAGCCCCGCGCCCCGCGCCGCGAGAACCTGGCCTCCCTGGAGCGCGAGCGCGC CGCCGAAGCAGAGAGGAAGGCTGCGGAGGCGGCGGGATGGGCAGCGGATCGTGGAGCTGCACCAGCGGATCGC TAGGTAATTAGAGAAAATAATTTGATATGTTGTTAAAGAGTCATGACCACTGGAAGTATTTTCAGGACGTAGA ${\tt AGATTGGAGCATTTGCGATGACCTTCCTGCAGGTGGAAGCATTGTGCACAGGTGGTTTGGTTTGACTCCCG}$ GATATGAGAATATCAAGCTCAAAATTTATGTTGTGATGATGAATTTCTCCCACTTGTACTTTAGGTGGCCAACTG ACGAACTGTGTTCACCTGATAAGGAGTCGTGGCTGCTTGGACAGGCTCAAACCAAGAGAGCCTTTCGTTTTGTCT $\tt CCCCTGTTTTTCTGCCTGCGTTTTCTCCACATTAGCCACTCAATTTCCAGTACCATCCTGGCGGATGACTTCAGC$ ${\tt ATTAGATGGTCAGGTGTATTTTTTTTTTATTAATAGGCGCATTCAGTTTGGAAAAGACAGCTTTTCATTAATGTCCCA}$ CGTAAAGGAATATGGCCTATACAGTACGTACGCTGCTGCTGGTCATATTTGTTCCTGTGATCTTATTGTATTTT CAAAGTTTGGAAGTATACTCGTGTGCTTTTGCTGTTTTTTTATGCTTCCTGGAATTTGGGGACTCATGAGAGACTT GAGGTTAGAGTTCTGCAAGTGAGAAGACACTACATGGTTGCAGCTGCCACATGAAGAACCCAAGCTCCTGTCAAA GTTGTGAATGCGACTTTGGATGAGATTAAGAAGGCCCAGTGGACGGTTGGTCTTGAAGAGTGGCAGTGTGGAT CATTTTGCTTTTTCTTGGAATGTAATTTTCCTATGGCATGTTAACTGGTGCACATCGTGTAACCTGTCTGGTGAG CAACCTACAATTGGGATGAGTTCTAGGTACATGTGTTTGCTGACTTTGGGGTAAACAACTTTGTTATAATACAGT GGTCCCAAACAGTCATTCCAGGCTTAGATGATGACTAGCCTAGGTCATCAGAGCCCAGACTCCACAGAGACTAAA ATCAGAGCTCTGTCTTGTTATGATAAATTTCATTTGCTTGGAAAAAGAAATGCTGAAAGCCAGTGTTTAGAATCT ΑΑΑΑΑΑΑΑΑΑ

MRPVDADEAREPREEPGSPLSPAPRAGRENLASLERERARAHWRARRKLLEIQSLLDAIKSEVEAEERGARAPAP RPRAEAEERVARLCAEAERKAAEAARMGRRIVELHQRIAGCECC

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GAGCGGCCCCCGCCCCCGCCGCAGGAAGCAGGAGGAGGTGGTGGCGGCGGGAAGATGCCGCTCTTTGGCGTA AATTGCAATCGATTAGGGATCGTTTCTCAGAATCAAGTTAGAAGTGAGAGTTCAGATAAGTGAGGCCGCCATTGC ATAATAAAAAGTCCAGCACTAGGGCCCCTTCACCTACCAAACGCAAAGACCGCTCAGATGAGAAGTCCAAGGATC GCTCAAAAGATAAAGGGGCCACCAAGGAGTCGAGTGAGAAGGATCGCGGCCGGGACAAAACGCGAAAAGAGGCACA GCGCTTCCAGTGGTAGCAGCAGTACCAGGTCTCGGTCCAGCTCCAGCTCCAGCTCCAGCACCAGCACCAGCACTG GCTCAAGCAGTGGCTCCAGCTCTCCTCAGCCTCCAGCCGCAGCTCCAGCACCTCCCGCAGCTCCAGCT AACCACCTAAAAGAGATGAAAAGGAGGAGAAAAGGCGGAGCCCATCTCCTAAGCCCACCAAAGTGCACATTGGGA GACTCACCAGGAATGTGACAAAGGATCACATCATGGAGATATTTTCCACCTATGGGAAAATTAAAATGATTGACA AGAAGGCGCTGAAGCACATGGATGGAGGACAAATTGATGGCCAGGAGATCACTGCCACCGTCGTGCTGGCCCCCT GGCCTAGGCCAACCCCCAGGAGATTCAGCCCTCCCAGGAGAATGTTGCCACCACCGCCTATGTGGCTCAGGTCTC CCCCACGGATGAGGAGAAGGTCCCGCTCCCCGAGGCGCAGGTCCCCGGTGCGCCGGAGATCACGGTCCCCGGGCC GCCGCCGCCACAGGAGCCGCTCCAGCTCCAACTCCTCCCAA<u>TAA</u>ACAGGCCACTGAAGCTCTCGCCCCTGTAACT TATACGCCACCCAGCTCAGTTTTGTCACTTTTCTAGCCAAAGCAAGACCAGTAGGAAAGCAAACCCTTGACTCTG GCAGGATTTGCAGGCAGCAGCAGCACCCCTCTGCCAGCCGGGCTCCGGCTGCAGAAGTGCTGTTGGCTTGGATG CTGTGTGCCTGTCAAGATTCCCTCCGGTTTTCTGGCTAGAAAGCTCACCCGTTTCCGGTTTTAAGAGTCAGTTCA GTGGCAGAGCCACCAGGGACAAGTGAGGCTCTTGGGGGGTGGTTTGACCCTGCTTACCTGGGAGCACACTTTTCCC TTCCCCGATGACCTGGGATGGTGGCCAGGCCGTGCCCTTGCTGTTGCTGGGCAGTGTCTTTTTGGAAAGGGAGCT GCCCCAGGCTTTAGTGCAGCTGCCAACGCTGTTAGGCCTGGCCTCTCGAGGCCTCTTCTGACTTCAAGGGTCACA GCCCCCAAAGATCCTCTCACCCATGGTAGTTGCTGCTCATGGTTCTGTCCGTGCACCGATGCATACACCA CACCCCACCGCTGTACTCTGAAATTGGCGAGTGAGTTGAGAGCCAGCTCTGCGGGGTCATCACGCAGCCATGGTT TTTTATTGTACAGTCAGTTCTATAAAATTTCTCTTTTGAGTTTTATACCTTTGTAGCATTTTAGATGACATTGTG TTTGTACTTTGTTGTAGAGTGGAAGAATTGTGTTGAATAAACCCAAGATCGGAATGC

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1527/6881 FIGURE 1413

ATAGAAGACTACTCGGAGAGCGCTGCCTCTGGGTTGGCGGGCTGGCAGGCTGTAGCCGAGCGCGGGCAGGACTCG TCCCGGCAGGGTTCCAGAGCCATGGGAGCGGAAAGGAGGCTGCTGTCGATTAAGGAGGCCTTTCGGCTGGCGCAG CAGCCGCACCAGAACCAGGCGAAGCTGGTGGTGGCGCTGAGCCGCACCTACCGCACGATGGATAAGACAGTT TTTCATGAGGAGTTCATTCATTACCTTAAATATGTTATGGTGGTCTATAAACGTGAACCAGCTGTGGAGAGGGTA ATAGAATTTGCAGCAAAGTTTGTTACCTCATTTCACCAATCAGATATGGAAGATGATGAGGAAGAGGAAGATGGT GGCCTTTTAAATTATTTGTTTACTTTTCTCTTAAAGTCTCATGAAGCAAACAGCAATGCAGTGAGATTTAGAGTG TGCCTGCTCATAAACAAGCTTTTGGGAAGTATGCCAGAAAATGCTCAGATTGATGATGATGTTTTGATAAAATT AATAAAGCCATGCTTATTAGATTGAAAGATAAGATTCCAAATGTGAGAATACAGGCAGTTCTGGCGCTTTCACGA GAAGTTAGACGGGCAGTGTTATCATGTATTGCACCATCAGCAAAGACTTTGCCAAAAATTGTAGGGCGCACCAAG GATGTGAAAGAGGCTGTCAGAAAGCTGGCTTATCAGGTTTTAGCTGAAAAGGTTCATATGAGAGCTATGTCCATT GCTCAGAGAGTAATGCTCCTTCAACAAGGTCTTAATGACAGATCAGATGCTGTGAAACAAGCTATGCAGAAGCAT CTTCTTCAAGGCTGGTTACGGTTCTCTGAAGGAAATATCTTAGAGTTGCTCCATCGGTTGGATGTAGAAAATTCT TCTGAAGTGGCAGTCTCTGTTCTCAATGCCTTGTTTTCAATAACTCCTCTCAGTGAACTGGTGGGACTCTGTAAA AACAATGATGGCAGGAAATTGATTCCAGTGGAAACATTAACTCCTGAAATTGCTTTGTATTGGTGTGCCCTTTGT GAATATTTGAAATCAAAAGGAGATGAAGGTGAAGAATTTTTAGAGCAGATTTTGCCAGAGCCTGTAGTATATGCA GACTATTTATTGAGTTACATCCAGAGCATTCCAGTTGTTAATGAAGAACACAGAGGTGATTTTTCCTATATTGGA AATTTGATGACAAAAGAATTCATAGGTCAACAATTGATTCTAATTATTAAGTCTTTGGATACCAGTGAAGAAGGA GGAAGAAAAAACTGCTGGCTGTTTTACAGGAGATTCTTATTTTACCCACAATCCCAATATCCCTGGTTTCTTTT CTTGTTGAAAGACTACTCCACATCATTATAGATGATAATAAGAGAACACAAATTGTTACAGAAATTATCTCAGAG GAAATAAAAGTTAAGCTTATCGAAGCCAAAGAAGCTTTGGAAAATTGCATTACCTTACAGGATTTTAATCGGGCA TCAGAATTAAAAGAAGAAATAAAAGCATTAGAAGATGCCAGAATAAACCTTTTGAAAGAGACAGAGCAACTTGAA ATTAAAGAAGTCCACATAGAGAAGAATGATGCTGAAACATTGCAGAAATGTCTTATTTTATGCTATGAACTGTTG AAGCAGATGTCCATTTCAACAGGCTTAAGTGCAACCATGAATGGAATCATCGAATCTTTGATTCTTCCTGGAATA ATAAGTATTCATCCTGTTGTAAGAAACCTGGCTGTTTTATGCTTGGGATGCTGTGGACTACAGAATCAGGATTTT GCAAGGAAACACTTCGTATTACTATTGCAGGTTTTGCAAATTGATGATGTCACAATAAAAATAAGTGCTTTAAAG GCAATCTTTGACCAACTGATGACGTTCGGGATTGAACCATTTAAAACTAAAAAATCAAAACACTTCATTGTGAA GGTACAGAAATAAACAGTGATGATGAGCAAGAATCAAAAGAAGTTGAAGAGACTGCTACAGCTAAGAATGTTCTG AAACTCCTTTCTGATTTCTTAGATAGTGAGGTATCTGAACTTAGGACTGGAGCTGCAGAAGGACTAGCCAAGCTG ATGTTCTCTGGGCTTTTGGTCAGCAGCAGGATTCTTTCTCGTCTTATTTTGTTATGGTACAATCCTGTGACTGAA GAGGATGTTCAACTTCGACATTGCCTAGGCGTGTTCTTCCCCGTGTTTGCTTATGCAAGCAGGACTAATCAGGAA TGCTTTGAAGAAGCTTTTCTTCCAACCCTGCAAACACTGGCCAATGCCCCTGCATCTTCTCCTTTAGCTGAAATT GATATCACAAATGTTGCTGAGTTACTTGTAGATTTGACAAGACCAAGTGGATTAAATCCTCAGGCCAAGACTTCC CAAGATTATCAGGCCTTAACAGTACATGACAATTTGGCTATGAAAATTTGCAATGAGATCTTAACAAGTCCGTGC TCGCCAGAAATTCGAGTCTATACAAAAGCCTTGAGTTCTTTAGAACTCAGTAGCCATCTTGCAAAAGATCTTCTG GTTCTATTGAATGAGATTCTGGAGCAAGTAAAAGATAGGACATGTCTGAGAGCTTTGGAGAAAATCAAGATTCAG TTAGAAAAAGGAAATAAAGAATTTGGTGACCAAGCTGAAGCAGCACAGGATGCCACCTTGACTACAACTACTTTC CAAAATGAAGATGAAAAGAATAAAGAAGTATATATGACTCCACTCAGGGGTGTAAAAGCAACCCAAGCATCAAAG TCTACTCAGCTAAAGACTAACAGAGGACAGAGAAAAGTGACAGTTTCAGCTAGGACGAACAGGAGGTGTCAGACT GCTGAAGCCGACTCTGAAAGTGATCATGAAGTTCCAGAACCAGAATCAGAAATGAAGATGAGACTACCAAGACGA GCCAAAACCGCAGCACTAGAAAAAGTAAACTTAACCTTGCCCAATTTCTCAATGAAGATCTAAGTTAGGAAAGA CGATGGAGGTGGAATCCTTTAAGATTATGTCCAGTTATTTGCTTTAATAAAGAAGAAGTTACCCTTGTCAAAATC AG

 ${\tt MAAPLGGMFSGQPPGPPQAPPGLPGQASLLQAAPGAPRPSSSTLVDELESSFEACFASLVSQDYVNGTDQEEIRTGVDQCIQKFLDIARQTECFFLQKRLQLSVQKPEQVIKEDVSELRNELQRKDALVQKHLTKLRHWQQVLEDINVQHKKPADIPQGSLAYLGAGICQHPCTSEANVSKGQRQLAYEWADA$

CCTAGACGCACGTCCGCTCGCCCGGCGCCCGAGCCAGTCCGCGCGCACGCCGTCTGCGCCCCGAAAGCCCCGCCC TGCTGCCTCTTCCGGCTGCGGGGCGAGTAGTCGTCCGACGTCTGGCCGTGAGACGTTTCGGGAGCCGGAGTCTCT CCACCGCAGACATGACGAAGGGCCTTGTTTTAGGAATCTATTCCAAAGAAAAAGAAGATGATGTGCCACAGTTCA TGAAGGCAGGGAAGACTCGAACCTTTTATGGTCTGCATCAGGACTTCCCCAGCGTGGTGCTAGTTGGCCTCGGCA AAAAGGCAGCTGGAATCGACGAACAGGAAAACTGGCATGAAGGCAAAGAAAACATCAGAGCTGCTGTTGCAGCGG GGTGCAGGCAGATTCAAGACCTGGAGCTCTCGTCTGTGGAGGTGGATCCCTGTGGAGACGCTCAGGCTGCGG ATGGAAGTGGGGATCAGGAGGCCTGGCAGAAAGGAGTCCTGTTTGCTTCTGGGCAGAACTTGGCACGCCAATTGA TGGAGACGCCAGCCAATGAGATGACGCCAACCAGATTTGCTGAAATTATTGAGAAGAATCTCAAAAGTGCTAGTA GTAAAACCGAGGTCCATATCAGACCCAAGTCTTGGATTGAGGAACAGGCAATGGGATCATTCCTCAGTGTGGCCA AAGGATCTGACGAGCCCCCAGTCTTCTTGGAAATTCACTACAAAGGCAGCCCCAATGCAAACGAACCACCCCTGG TGTTTGTTGGGAAAGGAATTACCTTTGACAGTGGTGGTATCTCCATCAAGGCTTCTGCAAATATGGACCTCATGA GGGCTGACATGGGAGGAGCTGCAACTATATGCTCAGCCATCGTGTCTGCTGCAAAGCTTAATTTGCCCATTAATA TTATAGGTCTGGCCCCTCTTTGTGAAAATATGCCCAGCGGCAAGGCCAACAAGCCGGGGGATGTTGTTAGAGCCA AAAACGGGAAGACCATCCAGGTTGATAACACTGATGCTGAGGGGAGGCTCATACTGGCTGATGCGCTCTGTTACG CACACACGTTTAACCCGAAGGTCATCCTCAATGCCGCCACCTTAACAGGTGCCATGGATGTAGCTTTGGGATCAG GTGCCACTGGGGTCTTTACCAATTCATCCTGGCTCTGGAACAAACTCTTCGAGGCCAGCATTGAAACAGGGGACC GTGTCTGGAGGATGCCTCTCTCGAACATTATACAAGACAGGTTGTAGATTGCCAGCTTGCTGATGTTAACAACA TTGGAAAATACAGATCTGCAGGAGCATGTACAGCTGCAGCATTCCTGAAAGAATTCGTAACTCATCCTAAGTGGG CACATTTAGACATAGCAGGCGTGATGACCAACAAAGATGAAGTTCCCTATCTACGGAAAGGCATGACTGGGAGGC CCACAAGGACTCTCATTGAGTTCTTACTTCGTTTCAGTCAAGACAATGCTTAGTTCAGATACTCAAAAATGTCTT CACTCTGTCTTAAATTGGACAGTTGAACTTAAAAGGTTTTTGAATAAATGGATGAAAATCTTTTAACGGAGACAA ATAAAGGTAAAGTTAATATCTTACTTGATAAGGATTTTTAAGATACTCTATAAATGATTAAAATTTTTAGAACTT ${\tt CCTAATCACTITICAGAGTATATGTTTTTCATTGAGAAGCAAAATTGTAACTCAGATTTGTGATGCTAGGAACAT}$ GAGCAAACTGAAAATTACTATGCACTTGTCAGAAACAATAAATGCAACTTGTTGTG

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1531/6881 FIGURE 1417

ATTCGGAGCTGCGGGAGCCGGCAGGAGCAGGATGGCGGCGGCGGCGGCTGCAGGCGAGGCGCCGGGTG AGCGTTGATGTGGTGGAGAATGAAGAGGCCAGCGCTAGCATCATTGTTAAAATGACAGACTCGTTCACTGAGCAG GCTGACCAGGTGACTGCTGAGGTTGGAAAGCTCTTGGGTGAAGAAGGTGGATGCAATTCTTTGCGTTGCTGGA GGATGGGCCGGGGCCAATGCCAAATCCAAGTCTCTCTTTAAGAACTGTGACCTGATGTGGAAGCAGAGCATATGG GCTGCCCTGGATGGGACTCCTGGTATGATCGGGTACGGCATGGCCAAGGGTGCTGTTCACCAGCTCTGCCAGAGC ATGAACAGGAAATCAATGCCTGAGGCTGACTTCAGCTCCTGGACACCCTTAGAATTCCTAGTTGAAACTTTCCAT CTCACCCCAGCATATTTTTAGGCCTCATCTCAGTGCCTATGAGGGGCCTGCCAGAAAAGTCACTAACCTGTCTCA GTGTGGCCTTGTCCAGCCTTGTTTTTCTGTAACCCCTGTTTGTGGTACGAGATAATGAGTCCTATTTTTCTCTC ACATAATATGCATTTGCTCTCCTAGGACAGTGTAATACATTTATGTGAAGTAAAGACATGCGAGACTGGTGGCCT $\tt TGGATCGCTTTTGTGACTGTTCATCTTGACAGTGGCTGTCATCTTGACTACTTTGTTGATTTGTTGGTAT$ $\tt TGGGGACATTTTAAAGGCTGAGTTATTTTTGAATGTCATGTTTATGTCATAGACGTAGTTTTCGCATCCTTGAAT$ TAAACTGCCTTAACTCCTTTTGTGGTATAAGCAAAACTACATGGACTCTGTCCTGGTATCCTTTTCCTGTGTGGT TGCCCCGTGTCCTCTGGCCTAGGGTTAAGTGTGCAAGATAACTACTCGTGAGTATTCAGAATGTTGTTCCTAATA AATGCACTTGTTGTCTGTCTTTTAATCAAATCACATCTTATATACAGCAGTCAGAGATGAGTATACTAGAATC AC

ACAGTCCCTCCGGGTGGCGGGCGCCCCGAGCGTGGCAGCGCGCTAGGCGGCAGCAGCGGGGCGCGGAGCGGGGCG AGCTGCGGGAGCCGGCTGGCAGGAGCAGGATGGCGGCGGCGGCGGCTGCAGGCGAGGCGCCGCGGTGCTGGTG ${\tt TACGGCGGCAGGGGCGCTCTGGGTTCTCGATGCGTGCAGGCTTTTCGGGCTCGCAACTGGTGGGTTGCCAGCGTT}$ GATGTGGTGGAGAATGAAGAGGCCAGCGCTAGCATCATTGTTAAAATGACAGACTCGTTCACTGAGCAGGCTGAC CAGGTGACTGCTGAGGTTGGAAAGCTCTTGGGTGAAGAGAAGGTGGATGCAATTCTTTGCGTTGCTGGAGGATGG GCCGGGGGCAATGCCAAATCCAAGTCTCTCTTTAAGAACTGTGACCTGATGTGGAAGCAGAGCATATGGACATCG CTGGATGGGACTCCTGGTATGATCGGGTACGGCATGGCCAAGGGTGCTGTTCACCAGCTCTGCCAGAGCCTGGCT GGGAAGAACAGCGGCATGCCGCCCGGGGCAGCCGCCATCGCTGTGCTCCCGGTTACCCTGGATACCCCGATGAAC AGGAAATCAATGCCTGAGGCTGACTTCAGCTCCTGGACACCCTTAGAATTCCTAGTTGAAACTTTCCATGACTGG ATCACAGGGAAAAACCGACCGAGCTCAGGAAGCCTCATCTCAGTGCCTATGAGGGGCCTGCCAGAAAAGTCACTA ACCTGTCTCAGTGTGGCCTTGTCCAGCCTTGTGTTTTCTGTAACCCCTGTTTGTGGTACGAGATAATGAGTCCTA TTTTTCTCTCACATAATATGCATTTGCTCTCCTAGGACAGTGTAATACATTTATGTGAAGTAAAGACATGCGAGA CTGGTGGCCTGCAAATAGCATCCGTCAATCTGTGTTAACTGCATAGGGAGGCTCTGCATAGCACCTGCTATAGCG GTGTCATGTTGGATCGCTTTTGTGACTGTTCATCTGTCCTTGACAGTGGCTGTCATCTTGACTACTTTGTTGATT TGTTGGTATTGGGGACATTTTAAAGGCTGAGTTATTTTTGAATGTCATGTTTATGTCATAGACGTAGTTTTCGCA

153376881 FIGURE 1419

GGCACGAGCGCAACCACAGCGCGCAGGGCAGGCGCGAGCTGGCCTCTGAGCCCCGGCCTCGGACCGCCCACTCCA CTCCCGGCACGCCCGGTGCCGCCTTCCGGCTCCAGTCCCCGGGCTCGGCCTCGGCGAGGTGTAATTCGCAGCGCG GGCCGGCCCCGGAGGCTCTCGGCGAGCGCGCGCGGTAACAAGTGGGCGAGG<u>ATC</u>CCGTACGAGATCAAGAAGGT GTTCGCCAGCCTCCCGCAGGTGGAGAGGGGCGTCTCCAAGATCATCGGCGGCGACCCTAAGGGCAACAATTTTCT GTACACCAATGGAAAGTGCGTCATCCTAAGGAACATCGACAACCCAGCCCTTGCTGACATCTACACAGAGCACGC CCATCAGGTGGTGGCCAAGTATGCGCCCAGCGGATTCTACATTGCCTCCGGAGATGTGTCTGGGAAGCTGAG GATCTGGGATACCACGCAGAAGGAGCACCTGTTGAAGTATGAGTACCAGCCTTTCGCTGGGAAGATCAAAGACAT GGATAGTGGCTCTTCTGTGGGCGAGATTACAGGACACAACAAGTCATCAACAGCGTGGACATCAAGCAGAGCCG GCCATACCGGCTGGCCACGGGAAGCGATGATAACTGCGCGGCATTCTTTGAGGGACCCCCATTCAAGTTCAAGTT CACAATTGGCGACCACAGCCGCTTTGTCAACTGTGTGCGATTCTCTCCTGATGGGAACAGATTTGCCACAGCCAG TGCTGACGGCCAGATATACATCTATGACGGGAAGACTGGGGGAGAAGGTGTGCGCGCTGGGCGGAAGCAAGGCCCA CGACGGTGGGATTTACGCAATTAGTTGGAGTCCCGACAGCACCCATTTGCTTTCTGCTTCTGGGGACAAAACTTC GGGCTGCCTATGGCAGAAGGACCACCTGCTCAGTGTCTCCCTGTCCGGGTACATCAACTATCTGGACAGAAACAA CAAGTCCTACATTTACTCTGGGAGCCACGACGGACACTTAATTACTGGGATTCAGAGACGGGGGAGAACGACTC CTTCGCTGGGAAAGGCCACACGAACCAGGTGTCCAGGATGACCGTGGATGAGTCGGGGCAGCTCATCAGCTGCAG CATGGACGACACCGTGCGGTACACCAGCCTCATGCTGCGGGACTACAGCGGACAAGGAGTTGTGAAACTGGACGT TCAGCCAAAGTGCGTAGCCGTCGGCCCCGGGGGATACGCCGTGGTCGTGTGCATTGGACAGATTGTCCTGCTGAA GGATCAGAGGAAGTGCTTCAGCATCGACAACCCCGGCTACGAGCCCGAAGTTGTGGCAGTGCACCCCGGCGGGGA CACGGTGGCAATTGGGGGTGTGGACGGCAACGTCCGCCTGTATTCCATCCTGGGCACCACGCTGAAGGATGAGGG CAAGCTCCTAGAGGCCAAGGGCCCCGTGACCGACGTGGCCTACTCCCACGACGGCGCCTTCCTCGCGGTGTGCGA CGCCAGCAAGGTGGTCACAGTGTTCAGCGTTGCTGACGGCTACTCGGAGAACAATGTTTTTTATGGACACCATGC AAAAATCGTCTGCCTGGCCTGGTCCCCAGACAATGAACACTTTGCCTCCGGTGGCATGGACATGATGTTATGT TTGGACCCTGAGTGACCCGGAAACCAGAGTCAAGATCCAAGATGCACCCGGCTGCACCATGTCAGCAGCCTGGC AGCCCCACCCCGCCTCTGGATGGACCGAATCAGGCACTAGAGTTTAACTGCAGCGGAACATGTCATTTCTCTAT TTCTGTGACGCGCCCCATGCCCCACCCACCACAAGAGGCAGGAGGGCCCAGTCATGACCCTCGTCTCTGCAG GGTGTCTGTACACGTTCTTCTGAAAGCTTTAGACAGTAACAGTTTGCACATGAAAAATAAAGCGAGCACCTAAAC AATGTGTGGAGCATAACTAAAACCCACAGCCCAACCAAACCTTGAGAATGCGAAACATTCCAGAGGCAGTAGCCT CCAAAGCACACAGAGCCCCTGGCCCCGCCGCGCTCTCACTATCTGTCAGGGGAGGTTGTACAGGTGAATGAGCC GGGGGGCTCATGTTCCTGCCTGCAGAACATTTCTGTACTAGTGAGAAGAGGGAATATGCATTGCAGTTCAGCAAA GCCGGAATTCTGTGTTGAACAGATGTCTGTCTCCCTAGTGTGTGACTCACACCTTGTGGCTGCCTTCAGAGCGCC ACCTCCAGATCAGATGGGGACACACCCCTGGATATGTTTCATTGTCAGATTTTGTGCTTGATTTTAAGAATG GAATTGTGGGTATCTTTCCTTTTTTTTTAATGTATCTTAACTGTTGCCTGTCAGTGTTTACAAACTAGTGCGTTG ACGGCACCGTGTCCAAGTTTTTAGAACCCTTGTTAGCCAGACCGAGGTGTCCTGGTCACCGTTTCACCATCATGC TTTGATGTTCCCCTGTCTTCCCCTCTTCTGCTCTCAAGAGCAAAGGTTAATTTAAGGACAAAGATGAAGTCACTG AAAA

MPYEIKKVFASLPQVERGVSKIIGGDPKGNNFLYTNGKCVILRNIDNPALADIYTEHAHQVVVAKYAPSGFYIAS GDVSGKLRIWDTTQKEHLLKYEYQPFAGKIKDIAWTEDSKRIAVVGEGREKFGAVFLWDSGSSVGEITGHNKVIN SVDIKQSRPYRLATGSDDNCAAFFEGPPFKFKFTIGDHSRFVNCVRFSPDGNRFATASADGQIYIYDGKTGEKVC ALGGSKAHDGGIYAISWSPDSTHLLSASGDKTSKIWDVSVNSVVSTFPMGSTVLDQQLGCLWQKDHLLSVSLSGY INYLDRNNPSKPLHVIKGHSKSIQCLTVHKNGGKSYIYSGSHDGHINYWDSETGENDSFAGKGHTNQVSRMTVDE SGQLISCSMDDTVRYTSLMLRDYSGQGVVKLDVQPKCVAVGPGGYAVVVCIGQIVLLKDQRKCFSIDNPGYEPEV VAVHPGGDTVAIGGVDGNVRLYSILGTTLKDEGKLLEAKGPVTDVAYSHDGAFLAVCDASKVVTVFSVADGYSEN NVFYGHHAKIVCLAWSPDNEHFASGGMDMMVYVWTLSDPETRVKIQDAHRLHHVSSLAWLDEHTLVTTSHDASVK EWTITY

GGCACGAGCGCAACCACAGCGCGCAGGGCAGGCGCGAGCTGGCCTCTGAGCCCCGGCCTCGGACCGCCCACTCCA CTCCCGGCACGCCCGGTGCCGCCTTCCGGCTCCAGTCCCCGGGCTCGGCCTCGGCGAGGTGTAATTCGCAGCGCG GGCCGGCCCCGGAGGCTCTCGGCGAGCGCGGCGCGCGTAACAAGTGGGCGAG<u>ATG</u>CCGTACGAGATCAAGAAGGT GTTCGCCAGCCTCCCGCAGGTGGAGAGGGGCGTCTCCAAGATCATCGGCGGCGACCCTAAGGGCAACAATTTTCT GTACACCAATGGAAAGTGCGTCATCCTAAGGAACATCGACAACCCAGCCCTTGCTGACATCTACACAGAGCACGC CCATCAGGTGGTGGCCAAGTATGCGCCCAGCGGATTCTACATTGCCTCCGGAGATGTGTCTGGGAAGCTGAG GATCTGGGATACCACGCAGAAGGAGCACCTGTTGAAGTATGAGTACCAGCCTTTCGCTGGGAAGATCAAAGACAT GGATAGTGGCTCTTCTGTGGGCGAGATTACAGGACACAAAAGTCATCAACAGCGTGGACATCAAGCAGAGCCG GCCATACCGGCTGGCCACGGGAAGCGATGATAACTGCGCGGCATTCTTTGAGGGACCCCCATTCAAGTTCAAGTT CACAATTGGCGACCACAGCCGCTTTGTCAACTGTGTGCGATTCTCTCCTGATGGGAACAGATTTGCCACAGCCAG TGCTGACGGCCAGATATACATCTATGACGGGAAGACTGGGGGAGAAGGTGTGCGCGCTGGGCGGAAGCAAGGCCCA CGACGGTGGGATTTACGCAATTAGTTGGAGTCCCGACAGCACCCATTTGCTTTCTGCTTCTGGGGACAAAACTTC CAAGATTTGGGACGTCAGCGTGAACTCCGTGGTCAGCACATTTCCCATGGGCTCCACGGTTCTGGACCAGCAGCT GGGCTGCCTATGGCAGAAGGACCACCTGCTCAGTGTCTCCCTGTCCGGGTACATCAACTATCTGGACAGAAACAA CCCCAGCAAGCCCCTGCACGTCATCAAGGGTCACAGTAAATCGATCCAGTGTCTGACGGTGCATAAAAACGGCGG CTTCGCTGGGAAAGGCCACACGAACCAGGTGTCCAGGATGACCGTGGATGAGTCGGGGCAGCTCATCAGCTGCAG CATGGACGACACCGTGCGGTACACCAGCCTCATGCTGCGGGACTACAGCGGACAAGGAGTTGTGAAACTGGACGT TCAGCCAAAGTGCGTAGCCGTCGGCCCCGGGGGATACGCCGTGGTCGTGCATTGGACAGATTGTCCTGCTGAA GGATCAGAGGAAGTGCTTCAGCATCGACAACCCCGGCTACGAGCCCGAAGTTGTGGCAGTGCACCCCGGCGGGGA CACGGTGGCAATTGGGGGTGTGGACGGCAACGTCCGCCTGTATTCCATCCTGGGCACCACGCTGAAGGATGAGGG CAAGCTCCTAGAGGCCCAAGGGCCCCGTGACCGACGTGGCCTACTCCCACGACGGCGCCTTCCTCGCGGTGTGCGA CGCCAGCAAGGTGGTCACAGTGTTCAGCGTTGCTGACGGCTACTCGGAGAACAATGTTTTTTATGGACACCATGA AACATTCCAGAGGCAGTAGCCTCCAAAGCACACAGAGCCCCTGGCCCGCCGCGGGCTCTCACTATCTGTCAGGGG TTGTGGCTGCCTTCAGAGCGCCACCTCCAGATCAGATGGGGACACACCACCCTGGATATGTTTCATTGTCAGAT GTGTTTACAAACTAGTGCGTTGACGGCACCGTGTCCAAGTTTTTAGAACCCTTGTTAGCCAGACCGAGGTGTCCT GGTCACCGTTTCACCATCATGCTTTGATGTTCCCCTGTCTTTCCCTCTTCTGCTCTCAAGAGCAAAGGTTAATTT AAAAGTAAGTATAAAGCACCGTGATTGGGAGTGTTTTTGCGTGTGCGGAATCACTGGTAAATGTTGGCTGAGAA CAATCCCTCCCCTTGCACTTGTGAAAACACTTTGAGCGCTTTAAGAGATTAGCCTGAGAAATAATTAAATATCTT TTCTCTTCAAAAAAAAAAAAAAAAAAAAA

MPYEIKKVFASLPQVERGVSKIIGGDPKGNNFLYTNGKCVILRNIDNPALADIYTEHAHQVVVAKYAPSGFYIAS GDVSGKLRIWDTTQKEHLLKYEYQPFAGKIKDIAWTEDSKRIAVVGEGREKFGAVFLWDSGSSVGEITGHNKVIN SVDIKQSRPYRLATGSDDNCAAFFEGPPFKFKFTIGDHSRFVNCVRFSPDGNRFATASADGQIYIYDGKTGEKVC ALGGSKAHDGGIYAISWSPDSTHLLSASGDKTSKIWDVSVNSVVSTFPMGSTVLDQQLGCLWQKDHLLSVSLSGY INYLDRNNPSKPLHVIKGHSKSIQCLTVHKNGGKSYIYSGSHDGHINYWDSETGENDSFAGKGHTNQVSRMTVDE SGQLISCSMDDTVRYTSLMLRDYSGQGVVKLDVQPKCVAVGPGGYAVVVCIGQIVLLKDQRKCFSIDNPGYEPEV VAVHPGGDTVAIGGVDGNVRLYSILGTTLKDEGKLLEAKGPVTDVAYSHDGAFLAVCDASKVVTVFSVADGYSEN NVFYGHHEK

ATTTTAGCTGTTGGTTCCGGCCGCACCGTGTGGGCTGTAGTAGCGGGAGGGGTGGGGGGTCCTCCAGAGTTAAGTG GCTGTCCTCGACTGTGCCCATACAGCAGCCAGCTTTCTTCCTTAATAACTGCCCGTTCGAAGAGTGCGAGGATGT CCAAGCGGCACCGGTTGGACCTAGGGGAGGATTACCCCTCTGGCAAGAAGCGTGCGGGGACCGATGGGAAGGATC GAGATCGAGACCGGGATCGTGAAGATCGGTCTAAAGATCGAGACCGAGAACGTGATAGAGGAGATAGAGAGCGAG AGAGGGAGAAAGAAAAGGAGAAGGAGTTGCGAGCTTCAACAAATGCTATGCTTATCAGTGCTGGATTACCACCTT TGAAAGCTTCCCATTCAGCTCACTCAACCCACTCAGCACATTCAACGCATTCAACACATTCTGCTCATTCAACGC ATGCCGGACATGCAGGTCACACGTCACTTCCACAGTGCATTAATCCGTTCACCAACTTACCCCATACTCCTCGAT ACTATGATATTCTAAAGAAACGTCTTCAGCTCCCTGTTTGGGAATACAAGGATAGGTTTACAGATATTCTGGTTA GACATCAGTCCTTTGTACTGGTTGGTGAGACTGGGTCTGGTAAAACAACACAGATTCCACAGTGGTGTGGGAGT ACATGCGATCATTACCAGGACCCAAGAGAGGAGTTGCCTGTACCCAACCCAGGAGAGTGGCTGCAATGAGTGTGG CTCAGAGAGTTGCTGATGAGATGGATGTGATGTTGGGCCAGGAAGTTGGTTACTCCATTCGATTTGAAGACTGCA AGCGTTATGGTGTAATAATTCTTGATGAGGCTCATGAGAGGACACTGGCTACAGATATTCTAATGGGTGTTCTGA AGGAAGTTGTAAGACAGAGATCAGATTTAAAGGTTATAGTTATGAGCGCTACTCTAGATGCAGGAAAATTCCAGA TTTACTTTGATAACTGTCCTCCTAACTATTCCTGGGCGTACACATCCTGTTGAGATCTTCTATACTCCAGAAC CAGAGAGAGATTATCTTGAAGCAGCAATTCGAACAGTTATCCAGATTCATATGTGTGAAGAGGAAGAGGGAGATC TTCTTCTTTTCTTAACTGGTCAAGAGGAAATTGATGAAGCCTGTAAGAGAATAAAGCGTGAAGTTGATGATTTGG GCCCTGAAGTTGGTGACATTAAAATCATTCCATTGTATTCTACACTTCCACCTCAGCAGCAGCAACGCATTTTTG AGCCTCCACCTCCCAAAAAACAGAATGGAGCAATTGGAAGAAAGGTAGTTGTGTCAACTAACATAGCAGAGACGT CTTTGACAATAGATGGTGTGTTTTGTGATTGATCCTGGATTTGCGAAACAGAAGGTCTACAATCCTCGAATCA GAGTTGAGTCCCTTTTGGTGACAGCTATTAGTAAAGCTTCAGCTCAGCAAAGGGCTGGTCGAGCTGGACGTACCA GACCTGGAAAATGCTTCAGACTTTACACAGAGAAAGCTTATAAAACAGAAATGCAGGATAACACCTATCCTGAGA TTTTGCGTTCTAATTTAGGATCAGTTGTGTTACAATTGAAGAAACTTGGTATTGATGACTTGGTACATTTTGATT TTATGGATCCACCAGCTCCTGAAACTCTGATGAGAGCCCTGGAACTTTTGAATTACCTGGCTGCTTTAAATGATG ATGGAGATCTGACTGAATTGGGATCCATGATGGCAGAGTTTCCTCTAGATCCACAGCTCGCAAAAATGGTTATTG GCCCCACGGAGGCCAAGAAAGCCGCAGATGAGGCCAAGATGAGATTTGCCCACATAGATGGAGATCATCTGACAC TGCTGAACGTCTACCATGCTTTTAAACAAAATCATGAATCGGTTCAGTGGTGTTATGACAACTTCATTAACTACA GGTCCCTGATGTCCGCAGACAATGTACGCCAGCAGCTATCTCGAATTATGGACAGATTTAATTTGCCTCGTCGAA GTACTGACTTTACAAGCAGGGACTATTATATTAATAAGAAAAGCTTTGGTTACTGGGTATTTTATGCAGGTGG CACATTTAGAACGAACAGGGCATTACTTAACTGTGAAAGATAACCAGGTGGTTCAGTTGCATCCCTCTACTGTTC TTGACCACAAACCTGAATGGGTGCTTTATAATGAGTTTGTTCTAACAACAAAGAATTACATCCGGACATGTACAG ATATCAAGCCAGAATGGTTGGTGAAAATTGCCCCTCAATATTATGACATGAGCAATTTCCCCACAGTGTGAAGCAA AGAGACAGTTGGACCGCATCATTGCCAAACTTCAATCCAAGGAATATTCACAGTACTGAATTCAGTGCTTAGAAC TGAAGTTATTGAGAGGACAGCTTTAAAAGATGAATGAACTCAAAAGTTCGAGTTGTGCTCTTCACGTTGGTTCGA TAATGGCCTTTATTTGAAAGCTTTTTAATTTTTCTTTACAGTAAATATTCCATTCTGATTTCATAAATTAAACAT TTATGCCTCCCTTTTGTGTTGACACTGTAGCTCATACTGGAAAAGTCGATCAATGTTTTGCAGTTTATTGAAAGT AGTTCTATATATAACAATGTTATAAGCATTTCTTTAGAAATGGTTGAAAATGCTTCTAAAATGTGATTATCGACC ATGGTATGCATGATCGTTGTAATTGTTGACATTCCTTTTAGAAGTTGTGAAATGTTACAACTTGTGCTTATGTAG ACACAATCTTCTGTCTCAGTACAGAGGCACTGACTTCAATAAAGTCTATTTATACT

FIGURE 1424A

AGGATTTTAAGAGTGGACTTGGTATTACCATAATTCCTATGAATGTAGCAAATGTAAAGCAAGTGGACCGAACTG TGAAACAATCTTTTGAAATAATCACTCCCTACAGGAGTTTCAGCTTTACAGCCGAGACTGAAAAGGAGAAACAAG TCTGTAAGAAGTGTGCAGGACAGCATAGATCTTTAGGACCAAAAGATTCCAAGGTTAGAAGTCTAAAAATGGATG CTAGCATTTGGAGCAATGAACTCATCGAGCTTTTTATTGTCATTGGAAACAAAAGAGCAAATGACTTTTGGGCTG GTAATCTTCAAAAGGATGAAGAATTACATATGGACTCACCAGTAGAAAAGAGAAAAAACTTTATTACTCAGAAAT ATAAAGAAGGAAAATTCAGAAAAACTCTTTTGGCATCTCTCACCAAAGAAGAATTAAATAAGGCTCTATGTGCTG CTGTAGTGAAACCGGATGTTCTAGAAACAATGGCTTTGCTGTTCAGTGGAGCAGATGTCATGTGTGCCACCGGAG ACCCCGTGCATAGCACCCCCTATCTGCTAGCCAAGAAAGCTGGGCAAAGTCTGCAAATGGAATTTCTCTACCATA ACAAATTCTCAGATTTCCCTCAACATGATATTCATTCCGAGGGTGTATTAAGTCAAGAGTCTTCCCAGTCCACAT CAAATAAAAATGGTGTGTTTTGGAAGGAGGCTTCTTGAGTTACTATGAAAATGATAAGTCTACCACACCTAATG GCACCATTAATATCAATGAAGTTATCTGCCTGGCTATACACAAAGAGGACTTCTATTTAAATACTGGGCCCATCT GGACAGAGGCAATAGCCAAGCATTTTGTTCCCTTATTTGCTGAAAACTTAACAGAAGCTGACTATGATTTGATTG ${\tt GTCAACTCTTCTACAAAGACTGCCATGCCCTGGATCAGTGGAGAAAAGGCTGGTTTGCTATGGACAAATCCAGCT}$ TGCATTTTTGCCTTCAAATGCAAGAAGTTCAGGGAGATAGAATGCACTTAAGAAGACTGCAAGAGCTAACAATCA GCACAATGGTTCAAAATGGGGAAAAACTGGATGTTTTACTCTTGGTAGAAAAAGGGAGAACATTATACATCCATG GGCATACCAAGTTGGATTTCACAGTCTGGCATACTGCAATTGAAAAAGCAGCAGGTACAGATGGTAATGCTTTAC AAGATCAGCAGCTCAGCAAAAATGACGTTCCCATTATAGTGAACAGCTGTATAGCATTTGTTACACAGTATGGTT TAGGATGCAAATATATCTATCAAAAGAATGGTGATCCTTTGCATATAAGTGAACTCCTGGAGAGTTTCAAAAAGG ATGCAAGAAGCTTTAAATTGAGGGCTGGAAAACATCAGCTTGAAGATGTGACGGCTGTTGAAAAAGTTTTCTCT CTGACATTGATGATGCACTGCTTACTAAGGAGCTCTACCCATATTGGATCTCTGCTTTAGATACGCAAGATGACA AGGAAAGAATTAAAAAATATGGAGCATTTATACGTTCTCTTCCAGGGGTCAACCGAGCAACACTAGCAGCTATCA TAGAAATATTTGAGGTTAAAGAAGATCAAGTCAAACAAATGGACATAGAAAATAGCTTTATTACCAAGTGGAAAG TAATTCGGATATCTCCTGTGATGGAAGCAGAAGAATTAACTAATGATATATTAGCGATAAAAAATATTATTCCTA CAAAAGGTGATATTTGGGCCACATTTGAAGTCATTGAAAATGAAGAGCTAGAGCGTCCTCTTCACTACAAGGAAA ATGTACTGGAGCAGGTGCTTCGGTGGAGTTCATTAGCTGAACCTGGCTCTGCTTACCTGGTGGTGAAGAGATTCT TAACCGCTGACACAATTAAACACTGCAGTGACCGGAGTACACTGGGAAGCATCAAAGAAGGAATCTTGAAAATCA AAGAAGAACCATCCAAAATACTATCTGGAAATAAGTTTCAAGACCGGTATTTTGTTTTACGAGATGGGTTTCTCT TTCTTTACAAGGATGTGAAGAGTAGTAAACATGACAAGATGTTTTCTCTCAGTTCCATGAAGTTTTATCGTGGAG TGAAAAAGAAAATGAAGCCTCCAACAAGCTGGGGATTGACCGCATATTCTGAGAAACATCACTGGCACCTGTGTT GTGATAGTTCACGAACTCAGACGGAGTGGATGACCAGTATCTTTATTGCCCAGCATGAATATGATATATGGCCAC CAGCTGGAAAGGAACGAAAACGTTCAATAACCAAAAATCCCAAAATTGGAGGTTTGCCTCTGATTCCTATACAGC ATGAGGGGAATGCAACCTTGGCCCGGAAAAATATTGAGAGTGCAAGAGCAGAACTTGAAAGGCTGCGGCTCAGTG AAAAGTGTGATAAAGAGTCCGTGGACTCTAGCTTAAAGGAGAGAGCTTCCATGGTGGCCCACTGCCTGGAGCACA AGGACGATAAACTTCGAAATCGACCCCGAAAACATCGGAGTTTCAACTGCCTGGAGGACACAGAGCCTGAAGCCC CACTTGGGCAACCAAAAGGCCATAAAGGCCTAAAGACATTGAGGAAGACTGAGGACAGGAATAGCAAAGCTACTT TGGACTCTGATCATAAGTTACCATCAAGGGTAATTGAAGAACTTAATGTGGTTCTACAACGGTCAAGAACCCTTC CAAAAGAATTACAGGATGAGCAGATTTTGAAGTAGGAAATAAAATGAATTGCTCCCCAGATTATTTTTTAATAT TGTATGCAATCTTTATGTGTAACTCCAAAACTGAACTATAAGATAATTCATAAGAATTTGCCTATTGATAGGCAA ATTTGTCTATGCTTAGGCATTTAAGGAGCATTTAAAAATATGTATATATGTGACTGAATGTAAGATTAACTTTAT TTTGGTCTGAACAAACCTTGTAAAGTTCCATTGTATTAACGTGTGTAAGAAGACATTGGGTTACTTAGGTGGTCA GTCCTTTTAAAGTAGTTGTCTGTTAAGTGGTATAATTTATGAGCAGAAATCTCAAACTGTACTGTATTGTATAAA

1539/6881 FIGURE 1424B

ATGCTGTGTTTAAATGAAGCCTAAGAAACTATCTGTAACATATTTTGCACTTTGAGAAACCTTGTATATTAAATT TTTATTGTAGTGGCTGCCTAAAAACCACTGGAGTTTTTAAAAGAAGCAAGGAGTTAAATGTCCTGCAAAACAAGG AAGTGAGCTAAGATTCATTCTAGTTCACTAATGACCAGAACTTGTCAATGAGAAACCACTTGTTAAGAAAAAGTC CAGTGTTTATTTCTCAAGAGTAATATTCGGCCAACAGATGTAAATAATAGCACTAGCCACTCTTATTAATATTTA TAGTGTTAGAAAACCAGCCACATTACAGATTCACTACGTTTGAGCTCATTGTTGGTGGCTGCTAAGAGGAAACTT ACACTGCATTGGAGAGGTTGTGTACACAGGACCTGGCCTGGATGCTGATTGCACTGTCATTGTATGCAAGCATTT TGTCTTTTTTCAGAATTTCTGACTATACTTTTGGTACGAACAAAATTCATCACCACAGGGTCCTGTTGTTTTGTT TGATTTTTAGATTTTTTAAATTATTATTAAGGTTGTAATGTTTTTCTCCGAGTTGTCAGAAATAACTGGAAGAA TACAATATATGGCCATTATGGAGCCAGGGGCTAGTTGGTGGTTTACTATACATTTGGGGGGCTACCTGGTCACATT TAATCTAGGTTTTTTTTTTTTTTTTTTTAAGTAAAGGTGTGGTCTCTTCCCTGTACTTATGAATAAGGACAAAGCCC CATGTTAGGGGAAGCATTTTTCCATCAGTTTCTTTAAAATTGGATTGTCTGGTGAGTTTTGATATTAAACATTAT CCAATCATAGTACAGTGATGTGGTGGTAGATGCTATGAATTTCTTCATTGTAAAATACGGATCATTTGTATTTTG ACAAAACTGCAGGACAGTTTATGAAATAGGTGGCACTATTAGGGAATCTTCCTTTAAAGCAAGAAATCATGTTAT GAAATTAATATTTGGTGATGTTGGACAGTGGAAAAGTATCTAGAGTTTTTACCTGCCTTATCTGAATTCTTCTTG AAACTTGAGCTTAAACTCTAATAGCTGTTTCCCTTTCTATTCTGAACAACTGTCTCCATTTTTCAAGTGTGAGAG ATAAGGGCTAATGATGACATCTCATTTATTTTGAGTAAACATTAAAATTGTTTTACAAGTCTACTTG

TTCTTTCTTTGCTGCGTCTACTGCGAGAATGAAGACTATTCTCAGCAATCAGACTGTCGACATTCCAGAAAATGT
CGACATTACTCTGAAGGGACGCACAGTTATCGTGAAGGGCCCCAGAGGAACCCTGCGGAGGACTTCAATCACAT
CAATGTAGAACTCAGCCTTCTTGGAAAGAAAAAAAAAGAGGCTCCGGGTTGACAAATGGTGGGGTAACAGAAAGGA
ACTGGCTACCGTTCGGACTATTTGTAGTCATGTACAGAACATGATCAAGGGTGTTACACTGGGCTTCCGTTACAA
GATGAGGTCTGTGTATGCTCACTTCCCCATCAACGTTGTTATCCAGGAGAATGGGTCTCTTGTTGAAATCCGAAA
TTTCTTGGGTGAAAAATACATCCGCAGGGTTCGGATGAGACCAGGTGTTGCTTGTTCAGTATCTCAAGCCCAGAA
AGATGAATTAATCCTTGAAGGAAATGACATTGAGCTTGTTTCAAATTCAGCGGCTTTGATTCAGCAAGCCACAAC
AGTTAAAAACAAGGATATCAGGAAATTTTTGGATGGTATCTATGTCTCTGAAAAAGGAACTGTTCAGCAGGCTGA
TGAATAAGATCTAAGAGTTACCTGGCTACAGAAAGGAAGATGCCAGATGACACTTAAGACCTACTTGTGATATTTA
AATGATGCAATAAAAGACCTATTGATTTGGACCTTCTTCTT

MKTILSNQTVDIPENVDITLKGRTVIVKGPRGTLRRDFNHINVELSLLGKKKKRLRVDKWWGNRKELATVRTICS HVQNMIKGVTLGFRYKMRSVYAHFPINVVIQENGSLVEIRNFLGEKYIRRVRMRPGVACSVSQAQKDELILEGND IELVSNSAALIQQATTVKNKDIRKFLDGIYVSEKGTVQQADE

PCT/US2003/028547

1542/6881 FIGURE 1427A

GTCCTTGCTTCTTTTTCATTGATGTAAATTTTTTTAACTTAATATGAAAACTCTCCAAGTCTTGATCATCAGCC AGGATTTTGCCACAGCAATTTCATTCTCTTATCGGAGCTTGTATGTGTCAAAGTATACTTCAGAGTGCAAACATT AAGCAAGTAATATTTTACCTACAGATACTTATGAAGACATTCTTTCGCTATCGTGAGTAAAAGTATATAAAGC TGTTTCTAACTGAAAATGCTTGAAATAAGCCTGTAATAGAAATATTTTTTCATTTTTTAAAAAAAGGGCGGAATTC ${\tt CCAGACTGTCTTCGCCTTCTTGCACTTCGCGGGAGAAGTTGTTGGCGCGAATGGATCCTGAGCCTCGATAACAGA}$ TTCCTCAACCGGCCCACCCGCCAGCCAGCCAGCGCCTTCATCCTGGGGCTGCGATGGACATTCGGAAATTCTTTG GAGTAATACCAAGTGGAAAGAAACTTGTAAGTGAAACAGTAAAGAAGAATGAGAAAACAAAGTCTGATGAAGAAA AACCAAGCAAGAAAAAGAGGATCATCTATGATTCAGATTCAGAGTCAGAGGAGACGTTGCAGGTAAAAAATGCCA CAGAAACAGATGAAGAAGATGACTTTATGTGTAAGAAGGCGGCCTCTAAATCAAAAGAGAATGGAAGATCTACAA ATAGTCATCTTGGAACATCAAACATGAAAAAGAATGAAGAAAACACTAAGACCAAGAATAAGCCTTTATCACCAA TAAAACTTACACCCACATCAGTACTTGATTATTTTGGAACTGGAAGTGTCCAAAGATCTAATAAGAAGATGGTGG CAAGCAAAAGAAAAGAGCTTTCACAAAATACAGATGAGTCTGGATTAAATGATGAAGCCATCGCCAAGCAATTAC AGCTTGATGAAGATGCGGAGCTGGAGAGGCAGTTGCATGAAGATGAAGATTTGCCAGAACATTAGCCATGTTGG ATGAAGAACCCAAGACCAAAAAGGCTCGAAAGGACACAGAAGCGGGAGAAACGTTTTCATCTGTCCAAGCCAATT GTCCTAGGAAGCAAAGTAAATATGAAAGTTCAAAAGAATCTCAGCAACATTCCAAGTCATCAGCTGACAAAATAG TAGAGCCTGTGGCCTCAAAAAGAAAAGAAAATGCCATTAAATTGAAAGGAGAGACAAAAACTCCTAAGAAAACCA AAAGTTCTCCAGCTAAAAAAGAGTCTGTAAGTCCTGAAGATTCTGAAAAGAAACGCACTAATTATCAAGCTTATC GAAGCTACTTAAATCGAGAAGGTCCCAAGGCTCTGGGCTCCAAAGAAATACCAAAGGGAGCTGAAAATTGCTTGG AAGGCCTTATATTTGTAATCACAGGCGTGCTGGAGTCTATTGAACGAGATGAGGCCAAGTCTCTAATTGAACGTT ATGGGGGAAAAGTAACAGGAAATGTCAGCAAGAAAACAAATTATCTTGTCATGGGTCGTGATAGTGGACAGTCCA AGAGTGATAAGGCCGCAGCCTTGGGGACAAAAATTATTGATGAAGATGGCCTGTTGAATCTGATTCGGACTATGC CAGGCAAGAAATCCAAGTATGAAATAGCAGTTGAAACTGAGATGAAGAAGAGTCCAAACTGGAGAGAACACCCC AAAAAATGTCCAAGGAAAAAGAAAAATTAGTCCATCTAAAAAGGAATCAGAATCTAAAAAGAGCAGGCCGACTT CCAAAAGGGACAGTTTGGCAAAGACAATAAAAAAGGAAACAGATGTGTTTTGGAAAAGCCTGGATTTCAAGGAGC AGGTGGCTGAGGAGACAAGTGGTGACAGCAAGGCTAGGAATTTGGCTGATGACAGCAGTGAAAACAAAGTGGAAA ATTTGCTCTGGGTGGATAAATATAAGCCAACCTCGCTCAAGACCATAATTGGACAGCAAGGTGACCAGAGCTGTG CCAACAAACTCCTACGCTGGCTCCGAAACTGGCAAAAGAGTTCTTCCGAAGATAAAAAAACACGCAGCAAAGTTTG GTAAATTTTCCGGCAAAGATGATGGCTCTAGTTTTAAAGCAGCGTTGCTGTCAGGCCCTCCTGGTGTTGGCAAAA CCACCACAGCTTCCCTGGTGTGTCAGGAGTTGGGATACAGCTACGTGGAACTGAATGCAAGTGACACCCGGAGTA AGAGCAGTTTGAAGGCGATTGTTGCTGAGTCACTGAACAATACCAGCATCAAAGGCTTTTATTCAAATGGAGCAG GAATTCAGGAATTAATTGGCCTGATAAAACATACTAAAATTCCCATTATTTGTATGTGCAATGATAGAAATCATC CCAAGATTCGCTCTCTGGTTCATTATTGTTTTGATCTTCGTTTTCAAAGACCTCGGGTTGAACAGATTAAGGGTG ATCAAGATATCAGACAGGTTTTACATAATCTGAGTATGTGGTGTGCACGAAGTAAAGCATTAACCTATGACCAGG CCAAAGCTGATTCTCACAGAGCCAAAAAGGATATCAAAATGGGCCCATTTGATGTTGCCCGGAAAGTGTTTGCAG CTGGAGAGGAGACTGCTCACATGTCACTTGTGGACAAGTCAGATCTCTTTTTTCATGATTATTCAATAGCACCCC TCTTCGTCCAGGAAAATTACATACACGTGAAGCCTGTAGCAGCAGGGGGTGACATGAAAAAGCACCTGATGCTTT TAAGCAGAGCAGCAGACAGCATATGCGATGGTGACCTAGTGGACAGCCAGATCCGGAGTAAGCAAAACTGGAGTC TTCTGCCTGCGCAGGCCATTTATGCCAGTGTTCTTCCTGGAGAGTTGATGAGGGGGTACATGACCCAGTTTCCCA CCTTCCCAAGCTGGCTGGGGAAGCACTCGTCTACAGGCAAACATGATCGTATTGTTCAGGACCTGGCCTTGCATA TGAGTCTCAGAACTTACTCCAGCAAAAGGACTGTAAACATGGATTATCTGTCGCTTCTAAGGGATGCACTTGTAC AGCCCTTGACCTCACAAGGAGTAGACGGAGTACAGGATGTTGTTGCACTTATGGACACATATTATTTGATGAAAG AAGACTTTGAGAATATCATGGAAATCAGCAGCTGGGGTGGCAAACCTAGTCCCTTTTCAAAGCTGGATCCCAAGG

FIGURE 1427B

TGAAAGCAGCCTTCACAAGAGCTTACAATAAGGAAGCCCACCTTACTCCATACTCACTTCAAGCTATAAAGGCAT CTAGACACAGCACAAGCCCATCCCTGGATTCGGAATACAATGAAGAATTAAATGAAGATGACTCTCAATCTGATG AGAAAGACCAAGATGCTATAGAAACTGATGCCATGATCAAGAAAAAGACAAAATCTTCAAAAGCCTTCAAAACCAG AAAAAGATAAGGAGCCCAGAAAAGGAAAAAGGAAAAAGTTCGAAGAAA**TGA**AACCATTTTTCACTAGCGACAGCCA CTTTTTACTCTCCCTCCTGACCAGTCCAGCTGGTCTAGAGAAAGCCTTGTTTTTTCCCAGAGCAACCATGTTTTA GCATAATGGGATGACCTGGTGTCCCATTATAAATAAAGGGTGGTATGGCTAGAAGGGTATGAGCAGTAGGCTTAT GTACACCTCTTATAGAGGTTGATAGGACTGCTTGGGTCCTCCACTGTCCTCTGTCAATCTAGTTAGACGTGCTTC TGAATGACTGTAGAATTGGAACTAGAAACTACACCTGGGCTTTGGAGTCAGATTTTAGTTAACAATAATGAGCCT GGAGCAGTAGTACTAAGGCGTCTTTTGTAGGCTTAAGAATTTATCCTAATGGCCTTTATAGGACCAATGCTGATT CTGGGTATTCTTTGTACATTGTCAGATATCTTTCAAAGTATAAATTAGGAATAAAAATGTTCCACATGATATGTG TACAAATTCTTTTTAAGATTGTCATCTTGTACAGCAAAATATTATGTTGGTATATTACTTCCTTATTAATTTGCA AATGATTGGATTAAAAAAGCTCACTGTATTCCTTACTAACCTGTTGTGTGAAACATAACATTGGCAGTCGAGGAG GTGGTCTGTTATGGGGCTTTGCAGCGTGGGGGGCTGCAGAAGATTCTCAGACATTCTTATCCTTCTGGAGTCTCA ACCCATCAGGTTCAGACCAGTAGGAACCAGGCTGGGTCAGGCTCTTAATTTCACTACGGTGGGGGACAAAATGAA CACTGGCTTTTGTTCACTTTGCCCCTGAGAGATCTAGTCCTGTCCTGTGATGGCTTCCACAAACCCTGTTGGAAG TTTGGGTTATTCCTATAACTGTATGTGTTGAGTGGCCGTGACGTATGGACCTAGCCTGGAATTTAGATGTCTAGC ATAAGGATCGTATTCCCTGCTTTAAGGAACTGGTAGTCTTGTTTGGGTGATGAGACAAAGTTCTTGAGACATTTA AACTGTATTTACCAGTGTGAAAAATGTCATTTATGGAGATTAATTCATTATGGAAATAAAACATTGCCTAAGCCC TTGCCTGCTG

MDIRKFFGVIPSGKKLVSETVKKNEKTKSDEETLKAKKGIKEIKVNSSRKEDDFKQKQPSKKKRIIYDSDSESEE TLQVKNAKKPPEKLPVSSKPGKISRQDPVTYISETDEEDDFMCKKAASKSKENGRSTNSHLGTSNMKKNEENTKT $\tt KNKPLSPIKLTPTSVLDYFGTGSVQRSNKKMVASKRKELSQNTDESGLNDEAIAKQLQLDEDAELERQLHEDEEF$ ARTLAMLDEEPKTKKARKDTEAGETFSSVQANLSKAEKHKYPHKVKTAQVSDERKSYSPRKQSKYESSKESQQHS KSSADKIGEVSSPKASSKLAIMKRKEESSYKEIEPVASKRKENAIKLKGETKTPKKTKSSPAKKESVSPEDSEKK ${\tt RTNYQAYRSYLNREGPKALGSKEIPKGAENCLEGLIFVITGVLESIERDEAKSLIERYGGKVTGNVSKKTNYLVM}$ ${\tt GRDSGQSKSDKAAALGTKIIDEDGLLNLIRTMPGKKSKYEIAVETEMKKESKLERTPQKNVQGKRKISPSKKESE}$ SKKSRPTSKRDSLAKTIKKETDVFWKSLDFKEQVAEETSGDSKARNLADDSSENKVENLLWVDKYKPTSLKTIIG QQGDQSCANKLLRWLRNWQKSSSEDKKHAAKFGKFSGKDDGSSFKAALLSGPPGVGKTTTASLVCQELGYSYVELNASDTRSKSSLKAIVAESLNNTSIKGFYSNGAASSVSTKHALIMDEVDGMAGNEDRGGIQELIGLIKHTKIPIIC MCNDRNHPKIRSLVHYCFDLRFQRPRVEQIKGAMMSIAFKEGLKIPPPAMNEIILGANQDIRQVLHNLSMWCARS ${\tt KALTYDQAKADSHRAKKDIKMGPFDVARKVFAAGEETAHMSLVDKSDLFFHDYSIAPLFVQENYIHVKPVAAGGD}$ ${\tt MKKHLMLLSRAADSICDGDLVDSQIRSKQNWSLLPAQAIYASVLPGELMRGYMTQFPTFPSWLGKHSSTGKHDRI}$ VQDLALHMSLRTYSSKRTVNMDYLSLLRDALVQPLTSQGVDGVQDVVALMDTYYLMKEDFENIMEISSWGGKPSP FSKLDPKVKAAFTRAYNKEAHLTPYSLQAIKASRHSTSPSLDSEYNEELNEDDSQSDEKDQDAIETDAMIKKKTK SSKPSKPEKDKEPRKGKGKSSKK

1545/6881 FIGURE 1429A

ATAGTTCGCGTAGCGGCTCGAGCGTGGAGATGAAGCGTATTTTCTCACTGCTAGAAAAGACTTGGCTTGGCGCAC CAATACAGTTTGCCTGGCAAAAAACATCAGGAAACTACCTTGCAGTAACAGGAGCTGATTATATTGTGAAAATCT TTGATCGCCATGGTCAAAAAAGAAGTGAAATTAACTTACCTGGTAACTGTGTTGCCATGGATTGGGATAAAGATG GAGATGTCCTAGCAGTGATTGCTGAGAAATCTAGCTGCATTTATCTTTGGGATGCCAACACAAATAAGACCAGCC AGTTAGACAATGGCATGAGGGATCAAATGTCTTTCCTTCTTTGGTCAAAAGTTGGAAGTTTCCTGGCTGTTGGAA CTGTTAAAGGAAATTTGCTTATTTATAATCATCAGACATCTCGAAAGATTCCTGTCCTTGGAAAACATACTAAGA ATCAGGAAGGTGACACGATAAGACAGACACAAGTGAGATCAGAGCCTAGCAACATGCAGTTTTTCTTGATGAAGA TGGATGACCGAACCTCTGCTGCAAAGCATGATAAGTGTGGTGCTTGGCAAGAAAACTTTGTTTTTTTAAATC TGAATGAACCAGATAACCCAGCTGATCTTGAATTTCAGCAGGACTTTGGCAACATTGTCTGCTATAATTGGTATG GTGATGGCCGCATCATGATTGGTTTTTCATGTGGACATTTTGTGGTCATTTCTACTCATACTGGAGAGCTTGGTC AAGAGATATTTCAGGCTCGTAACCATAAAGATAATCTAACCAGCATTGCAGTATCACAGACTCTTAACAAAGTTG ATGAGGAAAATAAAGGATTGGGTACCTTGTCCTGGACTGATGATGGCCAGTTGCTAGCACTCTCTACCCAAAGGG GCTCACTTCATGTTTTCCTGACCAAGCTTCCCATACTTGGGGATGCCTGCAGCACAAGGATTGCCTATCTCACCT ATGCTGTGAAAAAATTGAAAGATATGGAGTATCTGGGAACAGTAGCCAGTATTTGCCTTCATTCTGACTATGCTG CTGCACTTTTTGAAGGCAAAGTCCAGTTACATTTGATAGAAAGCGAAATCTTGGATGCTCAAGAAGAACGTGAGA CTCGGCTTTTCCCAGCAGTGGATGATAAGTGCCGTATCTTATGCCATGCCTTAACTAGTGATTTCCTCATCTATG GTACAGATACTGGTGTCGTTCAGTATTTCTACATTGAAGACTGGCAATTCGTTAATGATTATCGACATCCTGTCA GTGTGAAAAAGATTTTTCCCGACCCAAATGGGACCAGATTAGTTTTCATTGATGAAAAAAGTGATGGATTTGTTT GGCCAATGGATAAAGGTGTATTTATTGCTTATGATGATGATAAGGTGTACACTTATGTCTTTCACAAGGACACTA TACAAGGAGCCAAGGTTATTTTGGCTGGTAGCACCAAAGTTCCTTTTGCTCATAAACCTTTGCTGCTATATAATG GAGAGCTGACCTGCCAAACACAGAGTGGAAAAGTAAACAACATCTACCTTAGCACCCATGGCTTTCTCAGCAACT TAAAAGATACGGGGCCTGACGAACTGAGACCAATGCTGGCACAGAATTTAATGCTAAAGAGGTTTTCTGATGCTT GGGAAATGTGCAGGATTCTGAATGATGAGGCTGCCTGGAATGAGTTGGCCAGAGCTTGTCTACATCACATGGAAG TGGAGTTTGCAATCCGTGTTTATCGGAGAATTGGAAATGTTGGCATAGTGATGTCCTTGGAACAAATAAAGGGAA TAGAGGACTACAATCTTTTGGCAGGACACCTTGCCATGTTTACCAACGATTATAACCTGGCTCAGGACTTGTACC TTGCATCCAGCTGTCCTATTGCTGCCCTGGAGATGAGAAGGGATTTACAGCATTGGGACAGTGCTCTACAACTGG CAAAGCATTTGGCCCCAGACCAGATACCTTTTATATCAAAAGAATATGCTATTCAGCTTGAATTCGCGGGTGATT ATGTAAATGCTTTGGCTCATTATGAGAAAGGAATAACAGGTGATAATAAGGAACATGATGAAGCTTGTCTGGCTG GAGTGGCCCAGATGTCCATAAGAATGGGAGACATACGTCGAGGGGTTAACCAAGCCCTCAAGCATCCCAGCAGGG TCCTTAAAAGAGACTGTGGAGCCATATTGGAGAATATGAAGCAATTTTCAGAAGCGGCCCAACTGTATGAAAAAG GTCTCTACTACGATAAAGCAGCATCTGTTTACATCCGCTCTAAGAATTGGGCAAAAGTTGGTGATCTTCTGCCCC ACGTTTCTTCTCCTAAGATCCATTTGCAGTATGCCAAAGCCAAGGAAGCAGATGGAAGATACAAAGAAGCTGTTG CTGTCAATATTGTTAGAGAGACCCAGTCTCTGGATGGAGCCAAAATGGTAGCCAGGTTTTTTCTACAGCTTGGTG ACTATGGGTCTGCCATCCAGTTTCTTGTCATGTCCAAATGCAACAATGAAGCTTTCACACTGGCTCAGCAACACA ACAAAATGGAAATCTATGCAGATATTATTGGTTCTGAAGACACTACTAATGAAGACTATCAAAGCATTGCCTTAT ACTTTGAAGGAGAAAAGAGATATCTTCAGGCTGGAAAATTCTTCTTGCTGTGTGGCCAATATTCACGAGCACTTA AACACTTCCTGAAATGCCCAAGCTCGGAAGATAATGTGGCAATAGAAATGGCAATTGAAACTGTTGGTCAGGCCA AAGATGAACTGCTGACCAATCAGCTGATAGACCATCTCCTGGGGGAGAACGATGGCATGCCTAAGGATGCCAAGT ACCTGTTCCGCTTGTACATGGCTCTGAAGCAATACCGAGAAGCTGCCCAGACTGCCATCATCATTGCCAGAGAAG TCAAAATTCCCTCCGAGATGGCCACCAACCTCATGATTCTGCACAGCTATATACTAGTAAAGATTCATGTTAAAA ATGGAGATCACATGAAAGGGGCTCGCATGCTCATTCGGGTGGCCAACAACATCAGCAAATTTCCATCACACATTG

1546/6881 FIGURE 1429B

GCCATGGACCCTGTCTCAGTGTCATACCCATCTAATTACATGGAATCCATGAAGCCTAACAAGTATGGGGTCATC TACTCCACACCATTGCCTGAGAAGTTCTTTCAGACCCCAGAAGGTCTGTCGCACGGAATACAGATGGAGCCAGTG GACCTCACGGTGAACAAGCGGAGTTCACCCCCTTCGGCTGGGAATTCGCCCTCCTCTGAAGTTCCCGTCCTCA CACCGGAGAGCCTCGCCTGGGTTGAGCATGCCTTCTTCCAGCCCACCGATAAAAAAATACTCACCCCCTTCTCCA GGCGTGCAGCCCTTCGGCGTGCCGCTGTCCATGCCACCAGTGATGGCAGCTGCCCTCTCGCGGCATGGAATACGG AGCCCGGGGATCCTGCCCGTCATCCAGCCGGTGGTGGTGCAGCCCGTCCCCTTTATGTACACAAGTCACCTCCAG CAGCCTCTCATGGTCTCCTTATCGGAGGAGATGGAAAATTCCAGTAGTAGCATGCAAGTACCTGTAATTGAATCA TATGAGAAGCCTATATCACAGAAAAAATTAAAATAGAACCTGGGATCGAACCACAGAGGACAGATTATTATCCT GAAGAAATGTCACCCCCTTAATGAACTCAGTGTCCCCCCCGCAAGCATTGTTGCAAGAGAATCACCCTTCGGTC ${\tt ATCGTGCAGCCTGGGAAGAGACCTTTACCTGTGGAATCCCCGGATACTCAAAGGAAGCGGAGGATACACAGATGT}$ ${\tt AAACCCTACAAATGTACATGGGAAGGGTGCACATGGAAGTTTGCTCGGTCTGATGAACTAACAAGACATTTCCGA}$ ${\tt AAACATACTGGAATCAAACCTTTCCAGTGCCCGGACTGTGACCGCAGCTTCTCCCGTTCTGACCATCTTGCCCTC}$ ${\tt CATAGGAAACGCCACATGCTAGTCTGATTGCCTCTGTGTCCTGCCTCAGCGTGACTCCCCACTCACCTGGCTCTC}$ CAGACCTAAAGAATGTGAACACTTTTTT

FIGURE 1434

MERPSLRALLLGAAGLLLLLPLSSSSSSDTCGPCEPASCPPLPPLGCLLGETRDACGCCPMCARGEGEPCGGGG AGRGYCAPGMECVKSRKRRKGKAGAAAGGPGVSGVCVCKSRYPVCGSDGTTYPSGCQLRAASQRAESRGEKAITQ VSKGTCEQGPSIVTPPKDIWNVTGAQVYLSCEVIGIPTPVLIWNKVKRGHYGVQRTELLPGDRDNLAIQTRGGPE KHEVTGWVLVSPLSKEDAGEYECHASNSQGQASASAKITVVDALHEIPVKKGEGAEL

GGCACGAGGCTCGGGTCAAATGCGCGCCTCGGACCCTAGTGCGCGTGCGCGCTGGTGGCTCCGCCCCTTTGGAGC GCGCGCCATGGCCTCCGGGAGCCGCTCCTGGAGAGGAGGTGCGCTGCCGCCTCCTTCCAGCACTCATCGAGT CTGGGACGCGAGCTTCCTTATGACCCCGTGGACACGGAGGGCTTTGGAGAAGGTGGTGACATGCAGGAGCGTTTT CAGGAGGAGGAGGAGCAGCAGCAGCAGCGGGGGAGGAGCGACAGCAAAACCTACGGGCCAGGTCCCGG GAGCACCCGGTCGTGGGGCACCCGGACCCGGCATTGCCGCCCAGCGGCGTGAACTGCTCGGGCTGCGGGGCAGAG CTGCACTGCCAGGACGCCGGAGTGCCCGGCTACCTGCCCCGAGAGAAGTTCCTCCGCACGGCGGAGGCAGACGGC GGGCTGGCACGGACCGTGTGCCAGCGCTGCTGCTGCTGCCACCACCGGCGCGCTCTACGCCTGCAGGTGAGC $\tt CIGCTGGACCTGCCGACGCCCGACTTGCCCGGCTGGTGGGCCCCAAGCAGCTGATCGTGCTGGGA$ AACAAAGTGGACCTCCTGCCCCAGGATGCTCCTGGCTACCGGCAGGGCTGCGGGAGCGACTGTGGGAGGACTGT GCCCGCCGGGCTCCTGCTGGCCCTGGCCACCAAGGGCCACAGCGCCCCGTCAAGGACGAGCCACAGGACGGG GAGAATCCGAATCCGCCGAACTGGTCCCGCACAGTGGTCAGGGACGTGCGGCTGATCAGCGCCAAGACCGGCTAT GGAGTGGAAGAGTTGATCTCTGCCCTTCAGCGCTCCTGGCGCTACCGTGGGGACGTCTACTTAGTGGGCGCCACC AACGCCGGCAAATCCACTCTTTTAACACGCTCCTGGAGTCCGATTACTGCACTGCCAAGGGCTCCGAGGCCATC GACAGAGCCACCATCTCCCCTTGGCCAGGTACTACATTAAACCTTCTGAAGTTTCCTATTTGCAACCCAACTCCT TACAGAATGTTTAAAAAGGCATCAAAGACTTAAAAAAGATTCAACTCAAGCTGAAGAAGATCTTAGTGAGCAAGAA CAAAATCAGCTTAATGTCCTCAAAAAGCATGGTTATGTCGTAGGAAGAGTTGGAAGGACATTCTTGTATTCAGAA GAACAGAAGGATAACATTCCCTTTGAGTTTGATGCTGATTCACTTGCCTTTGACATGGAAAATGACCCTGTTATG GGTACACAAATCCACCAAACAAGTAGAATTGACTGCACAAGATGTGAAAGATGCCCACTGGTTTTATGACACC CCTGGAATTACAAAAGAAAATTGTATTTTAAATCTTCTAACAGAAAAAGAAGTAAATATTGTTTTGCCAACACAG TCCATTGTTCCAAGAACTTTTGTGCTTAAACCAGGAATGGTTCTGTTTTTGGGTGCTATAGGCCGCATAGATTTC $\tt CTGCAGGGAAATCAGTCAGCTTGGTTTACAGTCGTGGCTTCCAACATCCTCCTGTGCATATCACCTCCTTGGAC$ ${\tt AGGGCAGACGCTCTGTATCAGAAGCATGCAGGTCATACGTTACTCCAGATTCCAATGGGTGGAAAAGAACGAATGCAGATGCAGATTCCAGATTCCAATGGGTGGAAAAGAACGAATGCAGATTCAGATTCCAGATTCCAGATTCCAGATTCCAGATT$ GCAGGATTTCCTCCTCTTGTTGCTGAAGACATTATGTTAAAAGAAGGACTGGGGGCATCTGAAGCAGTGGCCGAC CCTGAAGGAACAGTTTTGACCGTCCGGCCCCCTCTCTTGCCATATATTGTTAACATCAAAGGACAGCGCATCAAG AAAAGTGTGGCCTATAAAACCAAGAAGCCTCCTTCCCTTATGTACAACGTGAGGAAGAAAAGGAAAAGATAAAT

MLPARLPFRLLSLFLRGSAPTAARHGLREPLLERRCAAASSFQHSSSLGRELPYDPVDTEGFGEGGDMQERFLFPEYILDPEPQPTREKQLQELQQQQEEEERQRQQRREERRQQNLRARSREHPVVGHPDPALPPSGVNCSGCGAELHCQDAGVPGYLPREKFLRTAEADGGLARTVCQRCWLLSHHRRALRLQVSREQYLELVSAALRRPGPSLVLYMVDLLDLPDALLPDLPALVGPKQLIVLGNKVDLLPQDAPGYRQRLRERLWEDCARAGLLLAPGHQGPQRPVKDEPQDGENPNPNWSRTVVRDVRLISAKTGYGVEELISALQRSWRYRGDVYLVGATNAGKSTLFNTLLESDYCTAKGSEAIDRATISPWPGTTLNLLKFPICNPTPYRMFKRHQRLKKDSTQAEEDLSEQEQNQLNVLKKHGYVVGRVGRTFLYSEEQKDNIPFEFDADSLAFDMENDPVMGTHKSTKQVELTAQDVKDAHWFYDTPGITKENCILNLLTEKEVNIVLPTQSIVPRTFVLKPGMVLFLGAIGRIDFLQGNQSAWFTVVASNILPVHITSLDRADALYQKHAGHTLLQIPMGGKERMAGFPLVAEDIMLKEGLGASEAVADIKFSSAGWVSVTPNFKDRLHLRGYTPEGTVLTVRPPLLPYIVNIKGQRIKKSVAYKKKKPPSLMYNVRKKKGKINV

GAAAGCTGTATTTGCTGCACGTGGAAATCTCCGTTATTTTCCAGCACCCAACAGTAGCGTAATGGGAGTAACGGA $\tt CTTAACCTCATTTCTCTTTCAGAGCATTTAGCCTTCATATGCCCTTCCCTGCATGCTTCCCCCAGGCCGTCAAGA$ $\tt CTTGAGTTCTGCCTCGCTTCCCGGCGGCGGTCGCAGCCCTCAGCCCACTTAGGATAATGGCGACAGCTGAGGTACT$ GAACATTGGTAAAAAATTATATGAGGGTAAAACAAAAGAAGTCTACGAATTGTTAGACAGTCCAGGAAAAGTCCT AAATAAAATCACCAGTTGTATTTTCAGTTATTACAGGAAGCAGGTATTAAAACTGCCTTCACCAGAAAATGTGG GGAGACAGCTTTCATTGCACCGCAGTGTGAAATGATTCCAATTGAATGGGTTTGCAGAAGAATAGCAACTGGTTC TTTTCTCAAAAGAAATCCTGGTGTCAAGGAAGGATATAAGTTTTACCCACCTAAAGTGGAGTTGTTTTCAAGGA TGATGCCAATAATGACCCACAGTGGTCTGAGGAACAGCTGATTGCTGCAAAATTTTGCTTTGCTGGACTTCTTAT AGGCCAGACTGAAGTGGATATCATGAGTCATGCTACACAGGCTATATTTGAAATACTGGAGAAATCCTGGTTGCC CCAGAATTGTACACTGGTTGATATGAAGATTGAATTTGGTGTTGATGTAACCACCAAAGAAATTGTTCTTGCTGA TGTTATTGACAATGATTCCTGGAGACTCTGGCCATCAGGAGATCGAAGCCAACAGAAAGACAAACAGTCTTATCG GTTGCTTTTGAAATCAGAAAGTCAGTGCAGGGTTGTAGTGTTGATGGGCTCTACTTCTGATCTTGGTCACTGTGA AAAAATCAAGAAGGCCTGTGGAAATTTTGGCATTCCATGTGAACTTCGAGTAACATCTGCGCATAAAGGACCAGA TAATGGTTTGGGACCAGTGATGTCTGGGAACACTGCATATCCAGTTATCAGCTGTCCTCCCCTCACACCAGACTG GGGAGTTCAGGATGTGTGTCTTCTCTCGACTACCCAGTGGTCTTGGCTGTTCAACCGTACTTTCTCCAGAAGG TAGAGAACACAAATAAAATGTATTAGTGAATAAATGCTTCTCTAGATCCATATTAATAAACATGAGCATCTAACC AGTATTGGTGGTCACTACTATTGAGTTTCTTCCTTAACACTGATTAAATGATCTTAACTCCCTCAGCTAAAACTG $\tt CCCAGGCTGGAGTGCAGTGGCTGATCTCAGTTCACTGCTGCTTCCCTCCTGGGCTCAAGCAGTTCTCCCACCT$ GGCACTCATGAAAAAACAGAATGCTCCCAACTTTATTCATCTTCCAAGCCTGTAGCTCTTGGTATACTCACTGTT TGTTAATTTCTGATTAACCCTTGAATTTACCGTCTTCTCATCCTCTGTACAAAAGCCTCAAGTGAGGGTCAAATT CAACATTATCCTGATCTAGACAGCCCCCATTCTCAATCCACCCTTTTCCAAGTTGATTGCCCCAAGGACTTCTAAC AATAAACTCTCTTTTGCACCACAGACTTCTTTGAAAATATACATGCTGTTGACCCTCTCTGTAGAAAACCGCACA CATAAAACTTACCAACAGATTTCATTGGTTCTTGGGTTCTCCCGAAGCCTATCCATGGTTTATAGATTAAGAATT AGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGTGAAACCCTGTCTCTACTAAAAATACAAAAAGTAGCCAGC CGTGATGACAGGCACCTGTAATCCCAGCTACTCGGGAGGCTGAGGCATGAGAATTGCTTGAACCCGGGAGGCGGA GGTTGCAGTGAGCCTAGATCATGCCACTGCACTCCAACCTGGGCAGCAGAGCAGAGCTCTGTCTCAAAAGGGGAA AAAAAAATTGCTGATGTGACCCATGAAGGGAACTCATTTTCCTCGTAATTTTGGACTGCCACACATTGGTACCT TTAGTTCTCTGAAGGCCCACGTTTTTATCATTAAGACCTATTTGTTAGCTAGTAGAGCTTTATGTTCGCTGTCCA CATTGTACACTTTATTTCCCTCACACTGTGTTATGCTCTGATGTGCTATGCTTAGCTATCTGTCAGAGATTAGTA AATTATAAAACTCATGTGTACTACTTAAGTTTATATCTTATGCTAGTTTATAAGAACAATTAAAAGGACTTAGAA GATTAA

1557/6881 FIGURE 1440A

ACCTTGGCCGCAGCGCAGGTCCTTCCACGTGCTTTCGGCGGCGACATGGAGCTGGAGGAGTTGGGGATCCGAGA GGAATGTGGCGTGTTCGGGTGCATCGCCTCAGGAGAGTGGCCCACGCAGCTGGATGTACCGCATGTGATCACTCT GGGACTCGTGGGGCTGCAGCACCGGGGTCAGGAGAGTGCTGGTATTGTGACTAGTGATGGGAGTTCGGTGCCAAC ATTCAAATCACACAAGGGAATGGGTCTTGTAAATCACGTCTTTACTGAAGACAATTTGAAAAAATTATATGTTTC AAATCTTGGAATTGGACACCAGGTATGCCACCACAGGAAAATGTGAACTAGAAAATTGTCAGCCCTTCG[']TTGT TGAAACACTTCATGGGAAGATAGCTGTGGCACATAATGGCGAATTGGTAAATGCTGCTCGATTAAGGAAAAAGCT TCTGCGTCATGGTATTGGTCTGTCTACAAGTTCTGATAGTGAAATGATTACCCAGTTACTGGCGTATACCCCTCC ${\tt CCTGCTTATAATGCACAGAGATGTTATTTATGCAGTACGAGATCCTTATGGAAATCGTCCCTTATGCATTGGTCG}$ TCTTATTCCAGTGTCTGATATAAATGACAAAGAGAAAAAAACATCAGAAACAGAAGGATGGGTGGTCTTCAGA ATCTTGTAGCTTCTTATCTATTGGTGCAAGATATTACCGTGAAGTCTTGCCTGGAGAAATTGTGGAAAATATCCAG ${\tt ACACAATGTCCAAACTCTTGATATTATCAAGGTCTGAAGGAAACCCAGTGGCTTTTTGTATCTTTGAATATGT}$ TTATTTTGCAAGACCAGACAGTATGTTCGAAGACCAAATGGTTTATACAGTAAGATACCGTTGTGGCCAGCAGCT AAACATGAGGTTAAGACAACTTGGTGTTGCAAAAAAATTTGGAGTATTGTCAGACAACTTTAAAGGCAAAAGAAT TGTTCTTGTAGATGATTCAATTGTCAGAGGCAATACCATCTCACCTATAATAAAACTGCTCAAAGAATCTGGTGC AAAAGAGGTACACATTCGAGTAGCTTCACCACCAATTAAATATCCATGCTTCATGGGAATAAACATTCCTACAAA AGAAGAGCTCATTGCCAATAAACCAGAATTTGATCACCTTGCAGAATATCTAGGAGCAAACAGTGTTGTGTATCT GTCAGTAGAAGGACTGGTTTCATCTGTACAAGAAGGGATAAAGTTTAAAAAACAGAAAGAGAAAAAGCACGATAT TATGATCCAAGAAAATGGAAATGGTCTGGAATGTTTTGAAAAGAGTGGTCATTGTACAGCTTGTCTCACTGGAAA ATATCCTGTAGAATTAGAATGGTAGCTGGTAGGGTTGGATGTGTAGTTTCAAGATAGAAAGTTGGTCAAGAAG TTATAGTGGTCACACCTCATCTATTTACTGTTACTCAGTTGGTACAATGTAAAATGCCATGCTTATGTTTATAAG TTTTGAGATTTTTTTTTTTCTGAAAAGGATACCAAAGTGCGATAACTGAACATTTCCAATTGCATATAATACAA CAATATGTGGTGTTCTTTTTTTTACACAAGCATTGGCTAGCCTTTTTAACCTGGTCAGAGAAGGCAGGTGGTCAC TGACATTTCCCAAGTCCATGCTTTAAAGGGTTTGCAAGAAGTTAGGGTTAAGGAGGGTGATGCCAACAAGACAG GTGAGTTAAATATACCATTTCACACAAAGTTTGAATAGAATACATTATACCTCATAGGTGTCTAGCCTCTACAGT TGTGATTTGAGCCATCATTTCACTTCTGATTTTAAGACAACTCATGATTGTTAGCTTTCAGAAAGCTAATGATTG TTAACTTTTTGAAATTAGTTTACAATTAATTAAGATTTCATTATGATGGAAGGAGACATAATTGGCAGATCTTTG ${\tt CCATCTCTTTGAGATGTCCTAAAAAGGGTTGTAAAAATCTGTGAAAAAGTTTTTCCTACATTTGACTAGAAAA}$ TGTGATCCATAGTATTTAGTGCCCTGATACTATAAGCTCAGCAAGTAACCTGGTACATTTGAAATAAAAACCAAA ACTTGCAAACATATACATGTAGATGTACATATACATGTACACATAAATATTATTGCAATTAAGTGAT CAAGTACAGACACAATAGGGGCCAGTTTTGTTTAAGGATCAAAGAGACAACCACTTTGGGGAATTAGTATCAACT TACAATCCAAGTCCAAGTATCATCTTATAATCACTTTTTTCTACTATATTAAGATCTAATGAATTTGATTTCTTT TTTGAAGTTTTTTCTTGTAACATCTGAGATTAGAAGTTTAAGATGACCTTGACCCCAAACCTTTGTTTATGTAAGA ATTTTTAAACATAAAAGTGTTTGTTTCTGTTATGTTACCATAATTTGATGTATATAGTGTCCAGATCCATTTAGA CCAAGATAAAATTTTGACAGCTCTTTAAGCCCACATGCAGCAGTGGGTCAGATAACCCTGTGGCAGTGACACGGG CAAATTGGCATTTGAATAAAGCCCTGGGACCACCTCAACATGCGTAGCCTCTTGTCTTAAATGTACTCCCCATGG CAGCATGGAGGAGGCAAGACCTGTGGGTCAATTTTGAACTGGCCTTACTTTGATTTTTAAAACAAGAGACTCAGG GAAAGTACTAAACCAAAATCTCTGATTTTACTTTGCGTTTTCTGTAGTTTTTGTTTTACTGAGATGCTTTTGTAA AGGAAAATAATACTGTGACAGTTTAGTAATTCTACAGATTCTTAATATTTCTCCATCATGGCCTTTTACTTCACA ATTTTCTGAAGTCTGAATTCAATTACAATTTTTTTTTACCAATTTAATCTCAAATGTTGTTTAACTGCTTTAAAT TCATATACGTAGAGTATTATAAACTGCAGAGATGAAAAATGTGTTTTCACGGGATTTATATTGTGAACTAAACTA

1558/6881 FIGURE 1440B

 ${\tt AGCCTACTTTTGTGACTTATTTGTGATGCCTTGTTGATAAATATGTGTAATAAGTATGTTTT}$

GTTTTTAGTTTGTTAGCTGCCTGGAGTGTTATTTTAAGAAAGCAGAAGCACCATCATTTGCACACTCCTTATAGA TCACACACCTTAACCCTGACTTTTTTTGCTCCAGTTTTTCAGAAGAAGTGAAGTCAAGATGAAGAACCATTTGCT TTTCTGGGGAGTCCTGGCGGTTTTTATTAAGGCTGTTCATGTGAAAGCCCAAGAAGATGAAAGGATTGTTCTTGT TGACAACAAATGTAAGTGTGCCCGGATTACTTCCAGGATCATCCGTTCTTCCGAAGATCCTAATGAGGACATTGT GGAGAGAACATCCGAATTATTGTTCCTCTGAACAACAGGGAGAATATCTCTGATCCCACCTCACCATTGAGAAC CAGATTTGTGTACCATTTGTCTGACCTCTGTAAAAAATGTGATCCTACAGAAGTGGAGCTGGATAATCAGATAGT TACTGCTACCCAGAGCAATATCTGTGATGAAGACAGTGCTACAGAGACCTGCTACACTTATGACAGAAACAAGTG CTACACAGCTGTGGTCCCACTCGTATATGGTGGTGAGACCAAAATGGTGGAAACAGCCTTAACCCCAGATGCCTG CTATCCTGACTAATTTAAGTCATTGCTGACTGCATAGCTCTTTTTCTTGAGAGGCTCTCCATTTTGATTCAGAAA GCCACCAAAATAATTAAAATAGTCACATTGTTATCTTTATTAGGTAATCACTTCTTAATTATATGTTCATACTCT AAGTATCAAAATCTTCCAATTATCATGCTCACCTGAAAGAGGTATGCTCTCTTAGGAATACAGTTTCTAGCATTA AACAAATAAACAAGGGGAGAAAATAAAACTCAAGGACTGAAAATCAGGAGGTGTAATAAAATGTTCCTCGCATTC CCCCCGCTTTTTTTTTTTTTTTGACTTTGCCTTGGAGAGCCAGAGCTTCCGCATTTTCTTTACTATTCTTTTT AAAAAAGTTTCACTGTGTAGAGAACATATATGCATAAACATAGGTCAATTATATGTCTCCATTAGAAAAATAAT AATTGGAAAACATGTTCTAGAACTAGTTACAAAAATAATTTAAGGTGAAATCTCTAATATTTATAAAAGTAGCAA AATAAATGCATAATTAAAATATTTTGGACATAACAGACTTGGAAGCAGATGATACAGACTTCTTTTTTTCATAA TCAGGTTAGTGTAAGAAATTGCCATTTGAAACAATCCATTTTGTAACTGAACCTTATGAAATATATGTATTTCAT GGTACGTATTCTCTAGCACAGTCTGAGCAATTAAATAGATTCATAAGCATA

GGTGCTGCAAGACTCTCTGGTAGAAAA**TG**AAGAGGGTCCTGGTACTACTGCTTGCTGGCATTTGGACATGCT TTAGAGAGGCCGGGATTATGAAAAGAATAAAGTCTGCAAGGAATTCTCCCATCTGGGAAAGGAGGACTTCACA TCTCTGTCACTAGTCCTGTACAGTAGAAAATTTCCCAGTGGCACGTTTGAACAGGTCAGCCAACTTGTGAAGGAA GTTGTCTCCTTGACCGAAGCCTGCTGTGCGGAAGGGGCTGACCCTGACTGCTATGACACCAGGACCTCAGCACTG TCTGCCAAGTCCTGTGAAAGTAATTCTCCATTCCCCGTTCACCCAGGCACTGCTGAGTGCTGCACCAAAGAGGGC GATGAAATCTGTGAGGCGTTCAGGAAAGATCCAAAGGAATATGCTAATCAATTTATGTGGGAATATTCCACTAAT TACGGACAAGCTCCTCTGTCACTTTTAGTCAGTTACACCAAGAGTTATCTTTCTATGGTAGGGTCCTGCTGTACC TCTGCAAGCCCAACTGTATGCTTTTTGAAAGAGAGACTCCAGCTTAAACATTTATCACTTCTCACCACTCTGTCA AATAGAGTCTGCTCACAATATGCTGCTTATGGGGAGAAGAAATCAAGGCTCAGCAATCTCATAAAGTTAGCCCAA AAAGTGCCTACTGCTGATCTGGAGGATGTTTTGCCACTAGCTGAAGATATTACTAACATCCTCTCCAAATGCTGT GAGTCTGCCTCTGAAGATTGCATGGCCAAAGAGCTGCCTGAACACACAGTAAAACTCTGTGACAATTTATCCACA GTCATGGATAAGTATACATTTGAACTAAGCAGAAGGACTCATCTTCCGGAAGTATTCCTCAGTAAGGTACTTGAG CCAACCCTAAAAAGCCTTGGTGAATGCTGTGATGTTGAAGACTCAACTACCTGTTTTAATGCTAAGGGCCCTCTA CTAAAGAAGGAACTATCTTCTTTCATTGACAAGGGACAAGAACTATGTGCAGATTATTCAGAAAATACATTTACT GAGTACAAGAAAAACTGGCAGAGCGACTAAAAGCAAAATTGCCTGATGCCACACCCACGGAACTGGCAAAGCTG GTTAACAAGCACTCAGACTTTGCCTCCAACTGCTGTTCCATAAACTCACCTCCTCTTTACTGTGATTCAGAGATT GATGCTGAATTGAAGAATATCCTG<u>TAG</u>TCCTGAAGCATGTTTATTAACTTTGACCAGAGTTGGAGCCACCCAGGG GAATGATCTCTGATGACCTAACCTAAGCAAAACCACTGAGCTTCTGGGAAGACAACTAGGATACTTTCTACTTTT

MKRVLVLLLAVAFGHALERGRDYEKNKVCKEFSHLGKEDFTSLSLVLYSRKFPSGTFEQVSQLVKEVVSLTEACC AEGADPDCYDTRTSALSAKSCESNSPFPVHPGTAECCTKEGLERKLCMAALKHQPQEFPTYVEPTNDEICEAFRK DPKEYANQFMWEYSTNYGQAPLSLLVSYTKSYLSMVGSCCTSASPTVCFLKERLQLKHLSLLTTLSNRVCSQYAA YGEKKSRLSNLIKLAQKVPTADLEDVLPLAEDITNILSKCCESASEDCMAKELPEHTVKLCDNLSTKNSKFEDCC QEKTAMDVFVCTYFMPAAQLPELPDVELPTNKDVCDPGNTKVMDKYTFELSRRTHLPEVFLSKVLEPTLKSLGEC CDVEDSTTCFNAKGPLLKKELSSFIDKGQELCADYSENTFTEYKKKLAERLKAKLPDATPTELAKLVNKHSDFAS NCCSINSPPLYCDSEIDAELKNIL

AGCTTTTCTCTTCTGTCAACCCCACACGCCTTTGGCACAATGAAGTGGGTAACCTTTATTTCCCTTCTTTTTCTC TTTAGCTCGGCTTATTCCAGGGGTGTTTTCGTCGAGATGCACACAAGAGTGAGGTTGCTCATCGGTTTAAAGAT TTGGGAGAAGAAATTTCAAAGCCTTGGTGTTGATTGCCTTTGCTCAGTATCTTCAGCAGTGTCCATTTGAAGAT CATGTAAAATTAGTGAATGAAGTAACTGAATTTGCAAAAACATGTGTTGCTGATGAGTCAGCTGAAAATTGTGAC AAATCACTTCATACCCTTTTTGGAGACAAATTATGCACAGTTGCAACTCTTCGTGAAACCTATGGTGAAATGGCT GACTGCTGTGCAAAACAAGAACCTGAGAGAAATGAATGCTTCTTGCAACACAAAGATGACAACCCAAACCTCCCC CGATTGGTGAGACCAGAGGTTGATGTGATGTGCACTGCTTTTCATGACAATGAAGAGACATTTTTGAAAAAAATAC TTATATGAAATTGCCAGAAGACATCCTTACTTTTATGCCCCGGAACTCCTTTTCTTTGCTAAAAGGTATAAAGCT GGGAAGGCTTCGTCTGCCAAACAGAGACTCAAGTGTGCCAGTCTCCAAAAATTTGGAGAAAGAGCTTTCAAAGCA TGGGCAGTAGCTCGCCTGAGCCAGAGATTTCCCAAAGCTGAGTTTGCAGAAGTTTCCAAGTTAGTGACAGATCTT ACCAAAGTCCACACGGAATGCTGCCATGGAGATCTGCTTGAATGTGCTGATGACAGGGCGGACCTTGCCAAGTAT ATCTGTGAAAATCAAGATTCGATCTCCAGTAAACTGAAGGAATGCTGTGAAAAAACCTCTGTTGGAAAAATCCCAC TGCATTGCCGAAGTGGAAAATGATGAGATGCCTGCTGACTTGCCTTCATTAGCTGCTGATTTTGTTGAAAGTAAG GATGTTTGCAAAAACTATGCTGAGGCAAAGGATGTCTTCCTGGGCATGTTTTTGTATGAATATGCAAGAAGGCAT CCTGATTACTCTGTCGTGCTGCTGCTGAGACTTGCCAAGACATATGAAACCACTCTAGAGAAGTGCTGTGCCGCT GCAGATCCTCATGAATGCTATGCCAAAGTGTTCGATGAATTTAAACCTCTTGTGGAAGAGCCTCAGAATTTAATC AAACAAAATTGTGAGCTTTTTGAGCAGCTTGGAGAGTACAAATTCCAGAATGCGCTATTAGTTCGTTACACCAAG AAAGTACCCCAAGTGTCAACTCCAACTCTTGTAGAGGTCTCAAGAAACCTAGGAAAAGTGGGCAGCAAATGTTGT CATGAGAAAACGCCAGTAAGTGACAGAGTCACCAAATGCTGCACAGAATCCTTGGTGAACAGGCGACCATGCTTT TCAGCTCTGGAAGTCGATGAAACATACGTTCCCAAAGAGTTTAATGCTGAAACATTCACCTTCCATGCAGATATA GCAACAAAAGAGCAACTGAAAGCTGTTATGGATGATTTCGCAGCTTTTGTAGAGAAGTGCTGCAAGGCTGACGAT AAGGAGACCTGCTTTGCCGAGGAGGGTAAAAAACTTGTTGCTGCAAGTCAAGCTGCCTTAGGCTTATAACATCAC TTTTTCGTTGGTGTAAAGCCAACACCCTGTCTAAAAAACATAAATTTCTTTAATCATTTTGCCTCTTTTCTCTGT GCTTCAATTAATAAAAAATGGAAAGAATCTAATAGAGTGGTACAGCACTGTTATTTTTCAAAGATGTGTTGCTAT CCTGAAAATTCTGTAGGTTCTGTGGAAGTTCCAGTGTTCTCTTTATTCCACTTCGGTAGAGGATTTCTAGTTTC TTGTGGGCTAATTAAATAATCATTAATACTCTTCTAAGTT

 ${\tt TCCATATTGTGCTTCCACCACTGCCAATAACAAAATAACTAGCAACC} \underline{{\tt ATG}} {\tt AGTGGGTGGAATCAATTTTTTAA}$ TTTTCCTACTAAATTTTACTGAATCCAGAACACTGCATAGAAATGAATATGGAATAGCTTCCATATTGGATTCTT ACCAATGTACTGCAGAGATAAGTTTAGCTGACCTGGCTACCATATTTTTTTGCCCAGTTTGTTCAAGAAGCCACTT ACAAGGAAGTAAGCAAAATGGTGAAAGATGCATTGACTGCAATTGAGAAACCCACTGGAGATGAACAGTCTTCAG ATTCAGACTGCTGCAGCCAAAGTGAAGAGGGAAGACATAACTGTTTTCTTGCACACAAAAAGCCCACTCCAGCAT CGATCCCACTTTTCCAAGTTCCAGAACCTGTCACAAGCTGTGAAGCATATGAAGAAGACAGGGAGACATTCATGA ${\tt ACAAATTCATTTATGAGATAGCAAGAAGGCATCCCTTCCTGTATGCACCTACAATTCTTTTTGGGCTGCTCGCT}$ TCCAAGCCATAACTGTTACTAAACTGAGTCAGAAGTTTACCAAAGTTAATTTTACTGAAATCCAGAAACTAGTCC TGGATGTGGCCCATGTACATGAGCACTGTTGCAGAGGAGGTGTGCTGGATTGTCTGCAGGATGGGGAAAAAATCA GTGGTCAATGTATAATTCATGCAGAAAATGATGAAAAACCTGAAGGTCTATCTCCAAATCTAAACAGGTTTTTAG GAGATAGAGATTTTAACCAATTTTCTTCAGGGGAAAAAAATATCTTCTTGGCAAGTTTTGTTCATGAATATTCAA GAAGACATCCTCAGCTTGCTGTCTCAGTAATTCTAAGAGTTGCTAAAGGATACCAGGAGTTATTGGAGAAGTGTT TCCAGACTGAAAACCCTCTTGAATGCCAAGATAAAGGAGAAGAAGAATTACAGAAATACATCCAGGAGAGCCAAG ACACAAAGAAAGCCCCCCAGCTGACCTCGTCGGAGCTGATGGCCATCACCAGAAAAATGGCAGCCACAGCAGCCA CTTGTTGCCAACTCAGTGAGGACAAACTATTGGCCTGTGGCGAGGGAGCGGCTGACATTATTATCGGACACTTAT GTATCAGACATGAAATGACTCCAGTAAACCCTGGTGTTGGCCAGTGCTGCACTTCTTCATATGCCAACAGGAGGC CATGCTTCAGCAGCTTGGTGGTGGATGAAACATATGTCCCTCCTGCATTCTCTGATGACAAGTTCATTTTCCATA AGCCACAAATAACAGAGGAACAACTTGAGGCTGTCATTGCAGATTTCTCAGGCCTGTTGGAGAAATGCTGCCAAG ${\tt GCCAGGAACAGGAAGTCTGCTTTGCTGAAGAGGGACAAAAACTGATTTCAAAAACTCGTGCTGCTTTGGGAGTT\underline{{\bm r}}$ ${\color{red} {\bf AA}}$ ATTACTTCAGGGGAAGAGAAAACGAGTCTTTCATTCGGTGTGAACTTTTCTCTTTAATTTTAACTGAT TTAACACTTTTTGTGAATTAATGAAATGATAAAGACTTTTATGTGAGATTTCCTTATCACAGAAATAAAATATCT CCAAATG

MKWVESIFLIFLLNFTESRTLHRNEYGIASILDSYQCTAEISLADLATIFFAQFVQEATYKEVSKMVKDALTAIE KPTGDEQSSGCLENQLPAFLEELCHEKEILEKYGHSDCCSQSEEGRHNCFLAHKKPTPASIPLFQVPEPVTSCEA YEEDRETFMNKFIYEIARRHPFLYAPTILLWAARYDKIIPSCCKAENAVECFQTKAATVTKELRESSLLNQHACA VMKNFGTRTFQAITVTKLSQKFTKVNFTEIQKLVLDVAHVHEHCCRGDVLDCLQDGEKIMSYICSQQDTLSNKIT ECCKLTTLERGQCIIHAENDEKPEGLSPNLNRFLGDRDFNQFSSGEKNIFLASFVHEYSRRHPQLAVSVILRVAK GYQELLEKCFQTENPLECQDKGEEELQKYIQESQALAKRSCGLFQKLGEYYLQNAFLVAYTKKAPQLTSSELMAI TRKMAATAATCCQLSEDKLLACGEGAADIIIGHLCIRHEMTPVNPGVGQCCTSSYANRRPCFSSLVVDETYVPPA FSDDKFIFHKDLCQAQGVALQTMKQEFLINLVKQKPQITEEQLEAVIADFSGLLEKCCQGQEQEVCFAEEGQKLI SKTRAALGV

1566/6881 FIGURE 1448A

TCACTTGCCTGATATTTCCAGTGTCAGAGGGACACAGCCAACGTGGGGTCCCTTCTAGGCTGACAGCCGCTCTCC AGCCACTGCCGCGAGCCCGTCTGCTCCGCCCTGCCCGTGCACTCTCCGCAGCCGCCCTCCGCCAAGCCCCAGCG CCCGCTCCCATCGCCGATGACCGCGGGGAGGAGGATGGAGATGCTCTGTGCCGGCAGGGTCCCTGCGCTGCT CTGCCTGGGTTTCCATCTTCTACAGGCAGTCCTCAGTACAACTGTGATTCCATCATGTATCCCAGGAGAGTCCAG TGATAACTGCACAGCTTTAGTTCAGACAGAAGACAATCCACGTGTGGCTCAAGTGTCAATAACAAAGTGTAGCTC AGTGGGTTATACTGGTGTCCGATGTGAACACTTCTTTTTAACCGTCCACCAACCTTTAAGCAAAGAATATGTGGC TTTGACCGTGATTCTTATTTTTTTTTTTTTTTTTATCACAGTCGTCGGTTCCACATATTATTTCTGCAGATGGTACAG AAATCGAAAAAGTAAAGAACCAAAGAAGGAATATGAGAGAGTTACCTCAGGGGATCCAGAGTTGCCGCAAGTCTG AATGGCGCCATCAAACTTATGGGCAGGGATAACAGTGTGCCTGGTTAATATTAATATTCCCATTTTATTAATAAT ATTTTTGACAGACTATTTGCTAATGTATAATGTGCAGAAAATATTTAATATCAAAAGAAAATTGATATTTTATA CAAGTAATTTCCTGAGCTAAATGCTTCATTGAAAGCTTCAAAGTTTATATGCCTGGTGCACAGTGCTTAGAAGTA GATTTAGTAAGTATGTTTTTTATGTTCCTCAAATCAGTGATAATTGGTTTGACTGTACCATGGTTTGATATGTAG TTGGCACCATGGTATCATATATTAAAACAATAATGCAATTAGAATTTGGGAGAAGCAAATATAGGTCCTGTGTTA AACACTACACATTTGAAACAAGCTAACCCTGGGGAGTCTATGGTCTCTTCACTCAGGTCTCAGCTATAATTCTGT TATATGAGGGGCAGTGGACAGTTCCCTATGCCAACTCACGACTCCTACAGGTACTAGTCACTCATCTACCAGATT AATGTTCCTTTTTTGTATATTACAACATTTATGTGAGGTAATTATTGCTCAACAGACAATTAGAAAAAAGTCCAC ACTTGAAGCCTAAATTTGTGCTTTTTAAGAATATTTTTAGACTATTTCTTTTTATAGGGGGCTTTGCTGAATTCTA ACATTAAATCACAGCCCAAAATTTGATGGACTAATTATTATTTTTAAAATATATGAAGACAATAATTCTACATGTT GTCTTAAGATGGAAATACAGTTATTTCATCTTTTATTCAAGGAAGTTTTAACTTTAATACAGCTCAGTAAATGGC TTCTTCTAGAATGTAAAGTTATGTATTTAAAGTTGTATCTTGACACAGGAAATGGGAAAAAACTTAAAAATTAAT ATGGTGTATTTTTCCAAATGAAAAATCTCAATTGAAAGCTTTTAAAATGTAGAAACTTAAACACACCTTCCTGTG GAGGCTGAGATGAAAACTAGGGCTCATTTTCCTGACATTTGTTTATTTTTTGGAAGAGACAAAGATTTCTTCTGC ACTCTGAGCCCATAGGTCTCAGAGAGTTAATAGGAGTATTTTTGGGCTATTGCATAAGGAGCCACTGCTGCCACC ACTTTTGGATTTTATGGGAGGCTCCTTCATCGAATGCTAAACCTTTGAGTAGAGTCTCCCTGGATCACATACCAG GTCAGGGAGGATCTGTTCTTCCTCTACGTTTATCCTGGCATGTGCTAGGGTAAACGAAGGCATAATAAGCCATGG CTGACCTCTGGAGCACCAGGTGCCAGGACTTGTCTCCATGTGTATCCATGCATTATATACCCTGGTGCAATCACA AGTCATTTGGTGCTCTGCTAACCATTTATATAAAACTTAAAAACAAGAGAAAAAGAAAAATCAATTAGATCTAAAC AGTTATTTCTGTTTCCTATTTAATACAGCTGAAGTCAAAATATGTAAGAACACATTTTAAATACTCTACTTACAG CCAGGTTGGAGTGCAGTGGCACGATCTCGGCTCACTGCAACCTCACCTCCCGGGTTCAAGAGATCCTCCTGCCTC AGCCTCCTGAGCAGCTGGGACTACAGGCGCATGCCCACCATGCCCAGCTAATTTTTGTATTTTTAGTAGAGGCGGG GTTTCACCATGTTGGCCAGGATGGTCTCAATCTCCTAACCTTGAGATCCACCCTCCACAGCCTCCCAAACTGCTG GGATTACAGGTGTGAGCCACCGCACGTAGCATTTACATTAGGTATTACAAGTAATGTAAAGATGATTTAAGTATA CAGGAGGATGTGAATAGGTTATATGCAAGCACTATGCCCTTTTATATAAGTGACTTGAACATCTGTGCCCGATTT CTAGATGTGAGGAGAGTCTGAATATTTTCAGTGATCTTGGCTGTTTCAAAAAAATCTATTGACTTTTCAATAAAT CAGCTGCAATCCATTTATTTCATTTACAAAAGATTTATTGTAAGCATCTCAATCTTGGTTTGTCAGTTTATCTTA AATAGTTAGATCTTTGTAAATGCATATTAAATAATAAAGTATGACCCACATTACTTTTTATGGGTGAAAATAAGA CAAAAATAATAGTTTTAGTGAGGATGGTGCTGAGTAAACATAAAAACTGATTTGCTCTCAGCTGATGTCCTGT

1567/6881 FIGURE 1448B

TTTCTTTTCTCCCCCCCCCCCTTTCACCATTTCCCCTCGGAGGCGCTTTCCCCGGGCAGGGGCAGAGCC GGTCTCACCCCCGCCTCTCCCCGGCCCCCGCCGCCCTATGGCGAGAGCCCCCTCCCAACCCGGGCTCGAG GCTCGAGCGCCAGCGCCCGCGCCCCCCGATCCGCTTCCCCTTTCTCCCTCAGTTGGCCGAGTCGTC CCGCGCGCACCGCCTCCGCGCGCCTATGAGAATGAGGTGGTAACGGGCCCCCGGATGACCCCGCGTCACCACTGT GAGGCCTACAGCTCTGCCGGGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGTAGCTACAGCAAGCTGGGTAGCA GGCAGATCCAAAGGATATCATGAAGTTTCCAGGGCCTTTGGAAAACCAGAGATTGTCTTTCCTGTTGGAAAAAGGC AATCACTAGGGAAGCACAGATGTGGGAAAGTGAATGTGCGGAAAATGCCTTCAAATCAGAATGTTTCTCCATCCCA GAGAGATGAAGTAATTCAATGGCTGGCCAAACTCAAGTACCAATTCAACCTTTACCCAGAAACATTTGCTCTGGC TAGCAGTCTTTTGGATAGGTTTTTAGCTACCGTAAAGGCTCATCCAAAATACTTGAGTTGTATTGCAATCAGCTG TTTTTTCCTAGCTGCCAAGACTGTTGAGGAAGATGAGAGAATTCCAGTACTAAAGGTATTGGCAAGAGACAGTTT CTGTGGATGTTCCTCATCTGAAATTTTGAGAATGGAGAGAATTATTCTGGATAAGTTGAATTGGGATCTTCACAC AGCCACACCATTGGATTTTCTTCATATTTTCCATGCCATTGCAGTGTCAACTAGGCCTCAGTTACTTTTCAGTTT TCTGCAATTCAGAGGATCCATGCTTGCTCTGGCCATGGTTAGTCTGGAAATGGAGAAACTCATTCCTGATTGGCT TTCTCTTACAATTGAACTGCTTCAGAAAGCACAGATGGATAGCTCCCAGTTGATCCATTGTCGGGAGCTTGTGGC ACATCACCTTTCTACTCTGCAGTCTTCCCTGCCTCTGAATTCCGTTTATGTCTACCGTCCCCTCAAGCACACCCT GGTGACCTGTGACAAAGGAGTGTTCAGATTACATCCCTCCTCTGTCCCAGGCCCAGACTTCTCCAAGGACAACAG CAAGCCAGAAGTGCCAGTCAGAGGTACAGCAGCCTTTTACCATCATCTCCCAGCTGCCAGTGGGTGCAAGCAGAC CTCTACTAAACGCAAAGTAGAAGGAAATGGAAGTGGATGACTTCTATGATGGAATCAAACGGCTCTATAATGAAGA TAATGTCTCAGAAAATGTGGGTTCTGTGTGGCACTGATTTATCAAGACAAGAGGGACATGCTTCCCCTTGTCC $\texttt{ACCTTTGCAGCCTGTTTCTGTCATG} \underline{\textbf{TAGC}} \textbf{TTTCAACAAGTGCTACCTTTGAGTGTAAACTAAGGTAGACTACTTTG}$ GGAATGAGAACATGCAAAATCAGGAAAGGCTGTAGAAGGAAATATACCTTAACAGGCTGATTTGGAGTGAGCCAG AAAAAAAAATAAAACTCTCATTATTTGTGTGGCTAATTATAATTCAGCGTTATTTAAGCACATAAAGACCAAAA ΑΑΑΑΑΑΑΑΑΑΑΑΑ

MKFPGPLENQRLSFLLEKAITREAQMWKVNVRKMPSNQNVSPSQRDEVIQWLAKLKYQFNLYPETFALASSLLDR FLATVKAHPKYLSCIAISCFFLAAKTVEEDERIPVLKVLARDSFCGCSSSEILRMERIILDKLNWDLHTATPLDF LHIFHAIAVSTRPQLLFSLPKLSPSQHLAVLTKQLLHCMACNQLLQFRGSMLALAMVSLEMEKLIPDWLSLTIEL LQKAQMDSSQLIHCRELVAHHLSTLQSSLPLNSVYVYRPLKHTLVTCDKGVFRLHPSSVPGPDFSKDNSKPEVPV RGTAAFYHHLPAASGCKQTSTKRKVEEMEVDDFYDGIKRLYNEDNVSENVGSVCGTDLSRQEGHASPCPPLQPVS

CAAGAGAGCTCAGTCTTTATCCCTAGACGCTTCATTGATCGAATTCAAATCTTGCCCCGTGGGAATGGTTGTCCA ATGATGGAAGTATTGAGAAAAAGAAGTTCTTCAACTCTACCAGTTCCAGTGTTTAAGAGAAAGATTCCCTGATGC TGATATTTCCACTAAGAACACCTGCATTCTTCCCTTATCCCTGCTCTGGATTTTAGTTTTGTGCTTAGATTAAATC TTTTCCAGGAAAAAGAACTTCCCCATACAAATAAGCATGAGACTATGTAAAAATAACCTTGCAGAAGCTGATGGG GCAAACTCAAGCTTCTCACTCACAGCACCCTATATACACTTGGAGTTTGCATTCTTATTCATCAGGGAAGAAAG TTTCTTTGAAAATAGTTATTCAGTTATAAGTAATACAGGATTATTTTGATTATACTTGTTGTTTAATGTTTAA AATTTCTTAGAAAACAATGGAATGAGAATTTAAGCCTCAAATTTGAACATGTGGCTTGAATTAAGAAGAAAATTA TGGCATATATTAAAAGCAGGCTTCTATGAAAGACTCAAAAAGCTGCCTGGGAGGCAGATGGAACTTGAGCCTGTC AAGAGGCAAAGGAATCCATGTAGTAGATATCCTCTGCTTAAAAACTCACTACGGAGGAGAATTAAGTCCTACTTT TAAAGAATTTCTTTATAAAATTTACTGTCTAAGATTAATAGCATTCGAAGATCCCCAGACTTCATAGAATACTCA ATCTAATGACATTCAATAAAGTTGAGCAAACATTTTACTT

ACCATCATECCTGGGCACTTACAGGAAGGCTTCGGCTGTGTGGTCACCAACCGATTCGACCAGTTATTTGACGAC GAATCGGACCCCTTCGAGGTGCTGAAGGCAGCGGAGAACAAGAAAAAAAGAAGCCGGCAGGGGTGGCGTTGGGGGC GTGGCGCTTAAGAAGAAGAATAAGACGAGTTGGAAGAAGACCTGATCAACAACTTCAGGGTGAGGGGAAAATA ATTGATAGAAGACCAGAAAGGCAACCACCTTGTGAACGAAGATTCGAAAAGCCACTTGAAGAAAAGGGTGAAGGA GGCTAATTTTCAGTTGATAGACCGATTATTGACCGACCTATTCGAGGTCGTGGTGGTCTTGGAAGAGGTCGAGGG GGCCGTGGACGTGGAATGGGCCGAGGAGATGGATTTGATTCTCGTGGCAAACGTGAATTTGATAGGCATAGTGGA AGTGATAGATCTTCTTTTCACATTACAGTGGCCTGAAGCACGAGGACAAACGTGGAGGTAGCGGATCTCACAAC CATCATCCAGTGGCAGACACTGAAAATAAGGAGAATGATGTTGAAGAGGGTAAAAGAGGGGGTCCAAAAGAGATG ACTTTGGATGAGTGGAAGGCTATTCAAAATAAGGACCGGGCAAAAGTAGAATTTAATATCTGAAAACCAAATGAA GGTGCTGATGGGCAGTGGAAGAGGGATTTGTTTTCATAAATCAAAGAGTGAAGAGGCTTATGCTGAGGATTCAG TTATGGACCATCATTTCCAGAAGCCAGCAAATGATATAACGTCTCAGCTGGAGATCAATTTTGGAGACCTTGGCC GCCCAGGACGTGGCGGCAGGGGGGGACAAGGTGGACATGGGCGTGGTGGGCGCCCAAACCGTGGCAGCAGGACCG ACAAGTCAAGTACTTCTGCTCCTGATGTGGATGACCCAGAGGCATTCCCAGTTCTGGCTTAACTGGATGCCATAA GACAACCCTGGTTCCTTCGTGAACCCTTCTGTTCAAAGCTTTTGCATGCTTAAGGATTCCAAATGACAAATTAAA AAAAAAAAAAGACTGTCATTCATACCATTCACACCTAAAGACTGAATTTTATCTGTTTCAAAAATGAACTTATCT CGCTACACAGAAGTAACAAATATGGTAGTCAGTTTTGTATTTAGAAATGTATTGGTAGCAGGGATGTTTTCATAA TTTTCAGAGATTATGCATTCTTCATGAATACTTTTGTATTGCTGCTTGCAAATATGCATTTCCAAACTTGAAATA CCAATTACAAACTGGTTTTAAATATTGGACATACTGGCTTTAATACATGCTTTGCATATTCACACATGATCAACT ATACAGAAATATCAGTACTTGAAGAAA

AGACGCAGTCTCCGTCGTTGACGTTAGTCGCAGTCTTCGCTGCTAACGTTTTGTTATGAGTTGCTAAAATGGTGA AATGCTGCTCCGCCATTGGATGTGCTTCTCGCTGCTTGCCAAATTCGAAGTTAAAAGGACTGACATTTCACGTAT TCCCCACAGATGAAAACATCAAAAGGAAATGGGTATTAGCAATGAAAAGACTTGATGTGAATGCAGCCGGCATTT GGGAGCCTAAAAAAGGAGATGTGTTGTTCGAGGCACTTTAAGAAGACAGATTTTGACAGAAGTGCTCCAAATA TTAAACTGAAACCTGGAGTCATACCTTCTATCTTTGATTCTCCATATCACCTACAGGGGAAAAGAGAAAAACTTC GTATTGAAGAATTCCAATCCCAGTTCATTTTTGAACATAGCTACAGTGTAATGGACAGTCCAAAGAAACTTAAGC ATAAATTAGATCATGTGATCGGCGAGCTAGAGGATACAAAGGAAAGTCTACGGAATGTTTTAGACCGAGAAAAAC GTTTTCAGAAATCATTGAGGAAGACAATCAGGGAATTAAAGGATGAATGTCTGATCAGCCAAGAAACAGCAAATA GACTGGACACTTTCTGTTGGGACTGTTGTCAGGAGAGCATAGAACAGGACTATATTTCATGAAATAATTTCATGT TTTAAAGTGCTGCTTTGGATTCTCTGGAGCATTATGCATTATAGTTGTTATCCAAAGACTTTTTTGAAAATATGC AGAAATTTGTGGTAATTATGTATTTGTGTCTTGTGACAATTATGTTTTATAGACCTACACTAGTGCCAGGTCACT ATTGTAAGATGTTAAAATCTCAAGAAAATTTCACAGAGCTAAAGAAATGATGTCAAATTAGTCACATTAAGCTAT GTACATTGAATTTTACTTTAAATGCATTTTACTACAAAGCACAATTCATTTGTAATGCATATCCATCTTGGATTC AATCCAAGGTGCTTTAGCTATCAGTAGTACCAAAGGATCTTTTTACAAGGCTTCCTGTGGTATTGACTCTGAGAA TAACACATAGTGAAGATCTGTGGGCTTTTAAAATTGTTCACAGCCAATTTAAGAAGACCCCTCATGAAGTCTCAG TTTTCAGTACAGTACATCATTCCTCCTCACTAGGAGCACTTTGATGTAAACCAGAATAGCTTTAAAAAAGACAAAA AGGATCGTAGATCTGATTTTTAAATGGTTGGTTGCTCTGACAGATCTGAACACTTTGCTTCATGACTATTTCGTC ATAAAGGTATATGTTTAAAATCTGAATGGCAGTACTAGCTCTATACTTTTAATACTGCTTTGTATTTTATATGTA AAGTAGTATTGCTGACATTTTAAAAAAATACAAAATACAAAAGAAACCATTAGAAATTAATAACTGTGGCTCTTC ATTTAGAGAAACGGGTAATTAAAACAGCAGCTTTAGAATAGCTTCTTACTGAATATGCAAAAGAATAATTCCTTG TTATTTCCTAATTGATCCAAGTCTCATAAATTTAGCTTTTGTCATAATTCCTTACCGAAAACAACTGAAATTGAG TGGACCTCATTCAGAAGTCCATGTTGTAGCAGTTAGAATTTGAGTATCAGCCATTTCATTGTAGTAACAAAAATT GAATTGCATTTTGTGCTCAGTTGTTTATTGTAATTTTATTTTTGTTACATTAATATTAGTTAAGATATGGTCACT TGAATTTTTTGTATTTAAGAATTTTCTGTTTTAATGCATGTTATACTTTTATGTAGGATTCCAAACCTTCCCTCT AAATGGGATTTAACCCACATCTGCGAGATCAGCGTTATGCTAAGAGGAAATCACTGAGGCCATATCTTTTACAA

GCGGGAGTGTGCGCCGCGGAGAGTGGGAGGCGAAGGGGGAGGCCAGGGAGAGCCTTTGCAGCCA ATGGTGGCGGCGACACAGGGGGCAGCGGCGGCGGGAAGCGGAACCGGGACCGGGAACCGCGTCTGGA TCAAACTCCTCCCCACGACACTCTGAAGCAGCGGCACGGCACGGGAAGAATGGAAAATGTTTATAGGAGGCCTT AGCTGGGACACTACAAAGAAAGATCTGAAGGACTACTTTTCCAAATTTGGTGAAGTTGTAGACTGCACTCTGAAG TTAGATCCTATCACAGGGCGATCAAGGGGTTTTGGCTTTTGTGCTATTTAAAGAATCGGAGAGTGTAGATAAGGTC ${\tt CCGGTTAAAAAAATTTTTGTTGGTGGCCTTTCTCCAGATACACCTGAAGAGAAAATAAGGGAGTACTTTGGTGGT}$ TTTGGTGAGGTGGAATCCATAGAGCTCCCCATGGACAACAAGACCAATAAGAGGCGTGGGTTCTGCTTTATTACC TTTAAGGAAGAAGAACCAGTGAAGAAGATAATGGAAAAGAAATACCACAATGTTGGTCTTAGTAAATGTGAAATA ${\tt AAAGTAGCCATGTCGAAGGAACAATATCAGCAACAGCAACAGTGGGGATCTAGAGGAGGATTTGCAGGAAGAGCT}$ ${\tt CGTGGAAGAGGTGGTGACCAGCAGAGTGGTTATGGGAAGGTATCCAGGCGAGGTGGTCATCAAAATAGCTACAAA}$ ${\tt CCATACTAAATTATTCCATTTGCAACTTATCCCCAACAGGTGGTGAAGCAGTATTTTCCAATTTGAAGATTCATT}$ TGAAGGTGGCTCCTGCCACCTGCTAATAGCAGTTCAAACTAAATTTTTTGTATCAAGTCCCTGAATGGAAGTATG ACGTTGGGTCCCTCTGAAGTTTAATTCTGAGTTCTCATTAAAAGAAATTTGCTTTCATTGTTTTATTTCTTAATT GCTATGCTTCAGAATCAATTTGTGTTTTATGCCCTTTCCCCCAGTATTGTAGAGCAAGTCTTGTGTTAAAAGCCC ${\tt AGTGIGACAGTGTCATGATGTAGTGTCTTACTGGTTTTTTAATAAATCCTTTTGTATAAAAATGTATTGGCT}$ CTTTTATCATCAGAATAGGAAAAATTGTCATGGATTCAAGTTATTAAAAGCATAAGTTTGGAAGACAGGCTTGCC GAAATTGAGGACATGATTAAAATTGCAGTGAAGTTTGAAATGTTTTTAGCAAAATCTAATTTTTGCCATAATGTG CCATTAAGATTTATATGAATATTTTCCCAAATGCCCAGTTTTTGCTTAATATGTATTGTGCTTTTAGAACAAAT AAATCTGTTAATTATAATAGAAATGCGGCTAGTTCAGAGAGATTTTTAGAGCTGTGGTGGACTTCATAGATGAAT TCAAGTGTTGAGGGAGGATTAAAGAAAT

1576/6881 FIGURE 1457A

GACGAGCGCTGCACTAACGCAGGATCCGGCTGCCGAAGGTCCTCGCCAGCAGG<u>ATG</u>AAGTTAAAGGAAGTAGATC GTACAGCCATGCAGGCATGGAGCCCTGCCCAGAATCACCCCATTTACCTAGCAACAGGAACATCTGCTCAGCAAT AATCTTGTGCCACATTCTCCTCTTCTCACAGGTACCACAAGTTGATTTGGGGGCCTTATAAAATGGATTCCAAAG GAGATGTCTCTGGAGTTCTGATTGCAGGTGGTGAAAATGGAAATATTATTCTCTATGATCCTTCTAAAATTATAG CTGGAGACAAGGAAGTTGTGATTGCCCAGAATGACAAGCATACTGGCCCAGTGAGAGCCTTGGATGTGAACATTT TCCAGACTAATCTGGTAGCTTCTGGTGCTAATGAATCTGAAATCTACATATGGGATCTAAATAATTTTGCAACCC CAATGACACCAGGAGCCAAAACACAGCCGCCAGAAGATATCAGCTGCATTGCATGGAACAGACAAGTTCAGCATA TTTTAGCATCAGCCAGTCCCAGTGGCCGGCCACTGTATGGGATCTTAGAAAAAATGAGCCAATCATCAAAGTCA GTGACCATAGTAACAGAATGCATTGTTCTGGGTTGGCATGGCATCCTGATGTTGCTACTCAGATGGTCCTTGCCT CCGAGGATGACCGGTTACCAGTGATCCAGATGTGGGATCTTCGATTTGCTTCCTCCCACTTCGTGTCCTGGAAA ACCATGCCAGGGGGATTTTGGCAATTGCTTGGAGCATGGCAGATCCTGAATTGTTACTGAGCTGTGGAAAAGATG $\tt CTAAGATTCTCTGCTCCAATCCAAACACAGGAGGAGGTGTTATATGAACTTCCCACCAACACACAGTGGTGCTTCG$ ATATTCAGTGGTGTCCCCGAAATCCTGCTGTCTTATCAGCTGCTTCGTTTGATGGGCCGTATCAGTGTTTATTCTA CCTTTGGCACAGGACAGCCCCTTCCTCCGTTACAAATTCCACAGCAGACTGCTCAGCATAGTATAGTGCTGCCTC TGAAGAAGCCGCCCAAGTGGATTCGAAGGCCTGTTGGTGCTTCTTTTTCATTTGGAGGCAAACTGGTTACGTTTG AGAATGTCAGAATGCCTTCTCATCAGGGAGCTGAGCAGCAGCAGCAGCACCATGTGTTCATTAGTCAGGTTG TAACAGAAAAGGAGTTCCTCAGCCGATCAGACCAACTTCAGCAGGCTGTGCAGTCACAAGGATTTATCAATTATT GCCAAAAAAAATTGATGCTTCTCAGACTGAATTTGAGAAAAATGTGTGGTCCTTTTTGAAGGTAAACTTTGAGG ATGATTCTCGTGGAAAATACCTTGAACTTCTAGGATACAGAAAAGAAGATCTAGGAAAGAAGATTGCTTTGGCCT TGAACAAAGTGGATGGAGCCAATGTGGCTCTTAAAGACTCTGACCAAGTAGCACAGAGTGATGGGGAGGAGAGCC CTGCTGCTGAAGAGCAGCTCTTGGGAGAGCACATTAAAGAGGAAAAAGAAGAATCTGAATTTCTACCCTCATCTG GAGGAACATTTAATATCTCTGTCAGTGGGGACATTGATGGTTTAATTACTCAGGCTTTGCTGACGGGCAATTTTG AGAGTGCTGTTGACCTTTGTTTACATGATAACCGCATGGCCGATGCCATTATATTGGCCATAGCAGGTGGACAAG AACTCTTGGCTCGAACCCAGAAAAATACTTCGCAAAATCCCAAAGCAAAATTACCAGGCTCATCACTGCAGTGG TGATGAAGAACTGGAAAGAGATTGTTGAGTCTTGTGATCTTAAAAATTGGAGAGAGGCTTTAGCTGCAGTATTGA TCCTGCAGACTCAAGCATGTCTCTGCTATATTTGTGCAGGGAATGTAGAGAAATTAGTTGCATGTTGGACTAAAG CTCAAGATGGAAGCCACCCTTTGTCACTTCAGGATCTGATTGAGAAAGTTGTCATCCTGCGAAAAGCTGTGCAAC TCACTCAAGCCATGGACACTAGTACTGTAGGAGTTCTCTTGGCTGCGAAGATGAGTCAGTATGCCAATTTGTTGG GTGACAGACTTTGTAGAGCACAAGGAGAGCCTGTAGCAGGACATGAATCACCTAAAATTCCGTACGAGAAACAGC AGCTCCCCAAGGGCAGGCCTGGACCAGTTGCTGGCCACCACCAGATGCCAAGAGTTCAAACTCAACAATATTATC CCCATGGAGAAAATCCTCCACCTCCGGGTTTCATAATGCATGGAAATGTTAATCCAAATGCTTCTGGTCAGCTTC ${\tt CCACATCTCCAGGTCATATGCACCCCAGGTACCACCTTATCCACAGCCATCAGCCTTATCAACCAGCCCAGCCGT}$ ATCCCTTCGGAACAGGGGGTCAGCAATGTATCGACCTCAGCAGCCTGTTGCTCCTACTTCAAACGCTTACC CTTCACCTACCTCCAGCCCTGCTACTTCTTTCCCTCCCCCCTTCCTCTGGAGCATCCTTCCAGCATGGCGGAC TGCCTGCGTCCCAAAGAACAGGTCCTCAGAATGGTTGGAATGACCCTCCAGCTTTGAACAGAGTACCCAAAAAGA AGAAGATGCCTGAAAACTTCATGCCTCCTGTTCCCATCACATCACCAATCATGAACCCGTTGGGTGACCCCCAGT CACAAATGCTGCAGCAACAGCCTTCAGCTCCAGTACCACTGTCAAGCCAGTCTTCATTCCCACAGCCACATCTTC CAGGTGGCCAGCCCTTCCATGGCGTACAGCAACCTCTTGGTCAAACAGGCATGCCACCATCTTTTTCAAAGCCCA CCAAGAAACCTATTCCAGATGAGCACCTCATTCTAAAGACCACATTTGAGGATCTTATTCAGCGCTGCCTTTCTT CAGCAACAGACCCTCAAACCAAGAGGAAGCTAGATGATGCCAGCAAACGTTTGGAGTTTCTGTATGATAAACTTA GGGAACAGACACTTTCACCAACAATCACCAGTGGTTTACACAACATTGCAAGGAGCATTGAAACTCGAAACTACT

1577/6881 FIGURE 1457B

 ${\tt MKLKEVDRTAMQAWSPAQNHPIYLATGTSAQQLDATFSTNASLEIFELDLSDPSLDMKSCATFSSSHRYHKLIWG}$ PYKMDSKGDVSGVLIAGGENGNIILYDPSKIIAGDKEVVIAQNDKHTGPVRALDVNIFQTNLVASGANESEIYIW $\verb|DLNNFATPMTPGAKTQPPEDISCIAWNRQVQHILASASPSGRATVWDLRKNEPIIKVSDHSNRMHCSGLAWHPDV|\\$ ATQMVLASEDDRLPVIQMWDLRFASSPLRVLENHARGILAIAWSMADPELLLSCGKDAKILCSNPNTGEVLYELP THTQWCFDIQWCPRNPAVLSAASFDGRISVYSIMGGSTDGLRQKQVDKLSSSFGNLDPFGTGQPLPPLQIPQQTA QHSIVLPLKKPPKWIRRPVGASFSFGGKLVTFENVRMPSHQGAEQQQQHHVFISQVVTEKEFLSRSDQLQQAVQ SQGFINYCQKKIDASQTEFEKNVWSFLKVNFEDDSRGKYLELLGYRKEDLGKKIALALNKVDGANVALKDSDQVA QSDGEESPAAEEQLLGEHIKEEKEESEFLPSSGGTFNISVSGDIDGLITQALLTGNFESAVDLCLHDNRMADAII LAIAGGQELLARTQKKYFAKSQSKITRLITAVVMKNWKEIVESCDLKNWREALAAVLTYAKPDEFSALCDLLGTR $\verb|LENEGDSLLQTQACLCYICAGNVEKLVACWTKAQDGSHPLSLQDLIEKVVILRKAVQLTQAMDTSTVGVLLAAKM| \\$ ${\tt SQYANLLAAQGSIAAALAFLPDNTNQPNIMQLRDRLCRAQGEPVAGHESPKIPYEKQQLPKGRPGPVAGHHQMPR}$ VQTQQYYPHGENPPPPGF IMHGNVNPNASGQLPTSPGHMHTQVPPYPQPQPYQPAQPYPFGTGGSAMYRPQQPVA PPTSNAYPNTPYISSASSYTGQSQLYAAQHQASSPTSSPATSFPPPPSSGASFQHGGPGAPPSSSAYALPPGTTG $\verb|TLPAASELPASQRTGPQNGWNDPPALNRVPKKKKMPENFMPPVPITSPIMNPLGDPQSQMLQQQPSAPVPLSSQS|$ ${\tt SFPQPHLPGGQPFHGVQQPLGQTGMPPSFSKPN1EGAPGAP1GNTFQHVQSLPTKK1TKKP1PDEHL1LKTTFED}$ LIQRCLSSATDPQTKRKLDDASKRLEFLYDKLREQTLSPTITSGLHNIARSIETRNYSEGLTMHTHIVSTSNFSE TSAFMPVLKVVLTQANKLGV

PCT/US2003/028547

1579/6881 FIGURE 1459

GCAGAGCACAGCATCGTCGGGACCAGACTCGTCTCAGGCCAGTTGCAGCCTTCTCAGCCAAACGCCGACCAAGGA $\mathtt{AAACTCACTACC}$ GCTGATTCTGGAAGTTCTGAGGAAAAGCAGCTTTACAACAAATACCCAGATGCTGTGGCCACATGGCTAAACCCT GATGATATGGATGATGAAGATGATGATGACCATGTGGACAGCCAGGACTCCATTGACTCGAACGACTCTGATGAT GTAGATGACACTGATGATTCTCACCAGTCTGATGAGTCTCACCATTCTGATGAATCTGATGAACTGGTCACTGAT TTTCCCACGGACCTGCCAGCAACCGAAGTTTTCACTCCAGTTGTCCCCACAGTAGACACATATGATGGCCGAGGT GATAGTGTGGTTTATGGACTGAGGTCAAAATCTAAGAAGTTTCGCAGACCTGACATCCAGTACCCTGATGCTACA GACGAGGACATCACCTCACACATGGAAAGCGAGGAGTTGAATGGTGCATACAAGGCCATCCCCGTTGCCCAGGAC CTGAACGCGCCTTCTGATTGGGACAGCCGTGGGAAGGACAGTTATGAAACGAGTCAGCTGGATGACCAGAGTGCT GAAACCCACAGCCACAAGCAGTCCAGATTATATAAGCGGAAAGCCAATGATGAGAGCAATGAGCATTCCGATGTG ATTGATAGTCAGGAACTTTCCAAAGTCAGCCGTGAATTCCACAGCCATGAATTTCACAGCCATGAAGATATGCTG GTTGTAGACCCCAAAAGTAAGGAAGAAGATAAACACCTGAAATTTCGTATTTCTCATGAATTAGATAGTGCATCT ${\tt TCTGAGGTCAAT} \underline{{\tt TAA}}{\tt AAAGGAGAAAAAATACAATTTCTCACTTTGCATTTAGTCAAAAGAAAAAATGCTTTATAGC$ AAAATGAAAGAGAACATGAAATGCTTCTTCTCAGTTTATTGGTTGAATGTGTATCTATTTGAGTCTGGAAATAA CTAATGTGTTTGATAATTAGTTTAGTTTGTGGCTTCATGGAAACTCCCTGTAAACTAAAAGCTTCAGGGTTATGT CTATGTTCATTCTATAGAAGAAATGCAAACTATCACTGTATTTTAATATTTTGTTATTCTCTCATGAATAGAAATT TATGTAGAAGCAAACAAAATACTTTTACCCACTTAAAAAGAGAATATAACATTTTATGTCACTATAATCTTTTGT TTTTTAAGTTAGTGTATATTTTGTTGTGATTATCTTTTTGTGGTGTGAATAAATCTTTTATCTTGAATGTAATAA GAATTTGGTGGTGTCAATTGCTTATTTGTTTTCCCACGGTTGTCCAGCAATTAATAAAACATAACCTTTTTTACT **GCCTAAAAAAAAAAAAAAAAAA**

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 $\label{thmodmoded} \\ \text{MRIAVICFCLLGITCAIPVKQADSGSSEEKQLYNKYPDAVATWLNPDPSQKQNLLAPQTLPSKSNESHDHMDDMD} \\ \text{DEDDDDHVDSQDSIDSNDSDDVDDTDDSHQSDESHHSDESDELVTDFPTDLPATEVFTPVVPTVDTYDGRGDSVV} \\ \text{YGLRSKSKKFRPDIQYPDATDEDITSHMESEELNGAYKAIPVAQDLNAPSDWDSRGKDSYETSQLDDQSAETHS} \\ \text{HKQSRLYKRKANDESNEHSDVIDSQELSKVSREFHSHEFHSHEDMLVVDPKSKEEDKHLKFRISHELDSASSEVN} \\ \end{aligned}$

PCT/US2003/028547

1581/6881 FIGURE 1461

WO 2004/030615

CTTTTCAAGATGCCTGAGGAAGTGCACCATGGAGAGGAGGAGGTGGAGACTTTTGCCTTTCAGGCAGAAATTGCC CAACTCATATCCCTCATCATCAATACCTTCTATTCCAACGAGGAGATTTTCCTTCAGGAGTTGATCTCTAATGCT TCTGATGCCTTGGACAAGATTCGCTATGAGAGCCTGACAGACCCTTCAAAGTTGGACAGTGGTAAAGAGCTGAAA ATTGACATCATCCCCAACCCTCAGGAACGTACCCTGGCTTTGGTAGACACAGGCATTGGCATGACCAAAGCTGAT ATCTCCATGATTGGGCAGTTTGGTGTTGGCTTTTTTCTGCCTACCTGGTGGCAGAGAAACTGGTTGTGATCACAA AGCACAACGATGATGAACAGTATGCTTGGGAGTCTTCTGCTGGAGGTTCCTTCACTGTGCATGCTGATCATGGTG TCAAAGAAGTAGTGAAGAAGCATTCTCAGTTCATAGGCTATCCCATCACCCTTTATTTGGAGAAGGAACAAGACA CCAAGATCAAAGATGTGGGTTCAGATGAGGAGGATGACAGCAGTAAGGATAAGAAGAAGAAAACTAAGAAGATCA AAGAGAAATACATTGACTAGGAAGAACTAAACAAGACCAAGCCTATTTGGACCAGAAACCATGATGACATCACCC AAGAGGAGTATGGAGAATTCTATAAGAGCCTCACCAGTGACTGGGAAGACCACTTGGCAGTCAAGCACTTTTCTG TAGAAGGTCAGTTGGAATTCAGGGCATTGCTATTCAGTCCTCGTCGGGCTCCCTTTGACCTTTTTGAGAACAAGA AGAAAAAGAACAACATCAAACTGTATGTCCGCCGTGTGTTCATCATGGACAGCTGTGATGAGTTGATACCAGAGT ATCTCAATTTTATCCATGGTGGGTTGACTCTGAGGATCTGCCCCTGAACATCTCCCGAGAAATGCTCCAGCAGA GCAAAATCTTGAAAGTCATTCGCAAAAACATTGTTAAGAAGTGCCTTGAGCTCTTCTCTGAGCTGGCAGAAGACA AGGAGATTATAAGAAATTCTATGAGGCATTTTCTAAAAATCTCAAGCTTGGAATCCACGAAGACTCCACTAACCG CCACCGCCTGTCTGAGCTGCTGCGCTGTCACACCTCCCAGTCTGGAGATGAGATGACATCTCTGTCGTAGTATGT $\verb|TTCTCAC| \textbf{ATG} | \textbf{AAGGAGACACAGAAGTCCACCTATTACATCACTGGTGAGAGCAAAGAGCAGGTGGCCAACTCTGC|} \\$ TTTTGTGGAGCGAGTGCGGAAACAGGGCTTCGAGGTGGTATATATGACTGAGCCCATTGACGAGTACTGTGTGCA GCAGCTCAAGGAGTTTGATGGGAAAAGCCTGGTCTCAGTTACCAAGGAGGGTCTGGAGCTACCTGAGGATGAGGA GAAGGTTGAGAAGGTGACAATCTCCAATAGACTTGTGTCTTCACCCTGCTGCATTGTGACCAGCACCTACGGCTG GACAGCCAATATGGAGCAGATCATGAAAGCCCAGGCACTTCGGGACAACTCCACCATGGGCTATATGATGGCCAA AAAGCACCTGGAGATCAACCCCGACCACCCCATCATGGAGACGCTGCGGCAGAAGGCTGAGGCCGACAAGAATGA TAAGGCAGTTAAGGACCTGGTGGTGCTGTTTGAAACCGCCCTGCTATCTTCGGGGCTTTTCCCTTGAGGATCC CCAGACCCACTCCAACCACATCTACCACATGATCAAGCTAGGTCTAGGTACTGATGAAGATGAAGTGGCAGCAGA GGAACCCAGTGATGCAGTTCCTGATGAGATCCCCCCTCTTGAGGGTGATGAGGATGCGTCTCGCATGGAAGAAGT CCCTGTCCCACCTGGCTGCTGTGTCTAGTGTTTTTTTCCCTCTCCTGTCCTTGTGTTGAAGGCAGGAAACCAAG GGTGTCAAGCCCCATTCCCTCTCTACTCTTGACAGCAGGATTGGATGTTGTGTATTGTGGTTTATTTTTCT TCATTTTGTTCTGAAATTAAAGAATGTAAAATAAAGAATATGCCGTTTTTATAC

MKETQKSTYYITGESKEQVANSAFVERVRKQGFEVVYMTEPIDEYCVQQLKEFDGKSLVSVTKEGLELPEDEEEK KKMEESKEKFENLCKLMKEILDKKVEKVTISNRLVSSPCCIVTSTYGWTANMEQIMKAQALRDNSTMGYMMAKKH LEINPDHPIMETLRQKAEADKNDKAVKDLVVLLFETALLSSGFSLEDPQTHSNHIYHMIKLGLGTDEDEVAAEEP SDAVPDEIPPLEGDEDASRMEEVD

GAGCAGCAGAATTTCAACTCCAGTAGACTTGAATATGCCTCTGGGCAAAGAAGCAGAGCTAACGAGGAAAGGAAT TCTGCAGTGGCTCTGGGTCCAGCCCCTTACTTAAAGATCTGGAAAGCATGAAGACTGGGCTTTTTTTCCTATGTC TCTTGGGAACTGCAGCTGCAATCCCGACAAATGCAAGATTATTATCTGATCATTCCAAACCAACTGCTGAAACGG TAGCACCTGACAACACTGCAATCCCCAGTTTAAGGGCTGAAGCTGAAGAAAATGAAAAAGAAACAGCAGTATCCA CAGAAGACGATTCCCACCATAAGGCTGAAAAATCATCAGTACTAAAGTCAAAAGAGGAAAGCCATGAACAGTCAG CAGAACAGGGCAAGAGTTCTAGCCAAGAGCTGGGATTGAAGGATCAAGAGGACAGTGATGGTCACTTAAGTGTGA CAGAGAACACTGATTTTTTGGCTCCTGGTGTTAGTTCCTTCACAGATTCTAACCAACAAGAAAGTATCACAAAGA GAGAGGAAAACCAAGAACAACCTAGAAATTATTCACATCATCAGTTGAACAGGAGCAGTAAACATAGCCAAGGCC TAAGGGATCAAGGAAACCAAGAGCAGGATCCAAATATTTCCAATGGAGAAGAAGAAGAAGAAAAAAGAGCCAGGTG AATTTGATCAGGGTAACCAAGAACAAGAAGATAACTCCAATGCAGAAATGGAAGAGGAAAATGCATCGAACGTCA ATAAGCACATTCAAGAAACTGAATGGCAGAGTCAAGAGGGTAAAACTGGCCTAGAAGCTATCAGCAACCACAAAG AGACAGAAGAAAAGACTGTTTCTGAGGCTCTGCTCATGGAACCTACTGATGGTAATACCACGCCCAGAAATC ATGGAGTTGATGATGGCGATGATGGCGATGATGGCGGCACTGATGGCCCCAGGCACAGTGCAAGTGATG ACTACTTCATCCCAAGCCAGGCCTTTCTGGAGGCCGAGAGAGCTCAATCCATTGCCTATCACCTCAAAATTGAGG AGCAAAGAGAAAAAGTACATGAAAATGAAAATATAGGTACCACTGAGCCTGGAGAGCACCAAGAGGCCCAAGAAAG CAGAGAACTCATCAAATGAGGAGGAAACGTCAAGTGAAGGCAACATGAGGGTGCATGCTGTGGATTCTTGCATGA GCTTCCAGTGTAAAAGAGGCCACATCTGTAAGGCAGACCAACAGGGAAAACCTCACTGTGTCTGCCAGGATCCAG TGACTTGTCCTCCAACAAACCCCTTGATCAAGTTTGTGGCACTGACAATCAGACCTATGCTAGTTCCTGTCATC TATTCGCTACTAAATGCAGACTGGAGGGGACCAAAAAGGGGCATCAACTCCAGCTGGATTATTTTGGAGCCTGCA AATCTATTCCTACTTGTACGGACTTTGAAGTGATTCAGTTTCCTCTACGGATGAGAGACTGGCTCAAGAATATCC TCATGCAGCTTTATGAAGCCAACTCTGAACACGCTGGTTATCTAAATGAGAAGCAGAGAAATAAAGTCAAGAAAA TTTACCTGGATGAAAAGAGGCTTTTGGCTGGGGACCATCCCATTGATCTTCTTTAAGGGACTTTAAGAAAAAACT ACCACATGTATGTGTATCCTGTGCACTGGCAGTTTAGTGAACTTGACCAACACCCTATGGATAGAGTCTTGACAC ATTCTGAACTTGCTCCTCTGCGAGCATCTCTGGTGCCCATGGAACACTGCATAACCCGTTTCTTTGAGGAGTGTG ACCCCAACAAGGATAAGCACATCACCCTGAAGGAGTGGGGCCACTGCTTTGGAATTAAAGAAGAGGACATAGATG AAAATCTCTTGTTTTGAACGAAGATTTTAAAGAACTCAACTTTCCAGCATCCTCCTCTGTTCTAACCACCTTCAGA **AATATATGCAGCTGTGATACTTGTAGATTTATATTTAGCAAAATGTTAGCATGTATGACAAGACAATGAGAGTAA** TTGCTTGACAACAACCTATGCACCAGGTATTTAACATTAACTTTGGAAACAAAAATGTACAATTAAGTAAAGTCA ACATATGCAAAATACTGTACATTGTGAACAGAAGTTTAATTCATAGTAATTTCACTCTCTGCATTGACTTATGAG ATAATTAATGATTAAACTATTAATGATAAAAATAATGCATTTGTATTGTTCATAATATCATGTGCACTTCAAGAA AATGGAATGCTACTCTTTTGTGGTTTTACGTGTATTATTTTCAATATCCTTAATACCCTAATAAAGAGTCCATAAAA ATCC

ATGCCCCAACTCTCCGGAGGAGGTGGCGGCGGCGGGGGGGACCCGGAACTCTGCGCCACGGACGAGATGATCCCC TTCAAGGACGAGGCGATCCTCAGAAGGAAAAGATCTTCGCCGAGATCATCATCCCGAAGAGGAAGGCGATTTA GCTGACATCAAGTCTTCCTTGGTGAACGAGTCTGAAATCATCCCGGCCAGCAACGGACACGAGGTGGCCAGACAA GCACAAACCTCTCAGGAGCCCTACCACGACAAGGCCAGAGAACACCCCGATGACGGAAAGCATCCAGATGGAGGC CTCTACAACAAGGGACCCTCCTACTCGAGTTATTCCGGGTACATAATGATGCCCAAATATGAATAACGACCCATAC ATGTCAAATGGATCTCTTTCTCCACCCATCCCGAGAACATCAAATAAAGTGCCCGTGGTGCAGCCATCCCATGCG GTCCATCCTCTCACCCCCCTCATCACTTACAGTGACGAGCACTTTTCTCCAGGATCACACCCGTCACACATCCCA TCAGATGTCAACTCCAAACAAGGCATGTCCAGACATCCTCCAGCTCCTGATATCCCTACTTTTATCCCTTGTCT CCGGGTGTGTTGGACAGATCACCCCACCTCTTGGCTGGCAAGGTCAGCCTGTATATCCCATCACGGGTGGATTC AGGCAACCCTACCCATCCTCACTGTCAGTCGACACTTCCATGTCCAGGTTTTCCCATCATATGATTCCCGGTCCT CCTGGTCCCCACACTGGCATCCCTCATCCAGCTATTGTAACACCTCAGGTCAAACAGGAACATCCCCACACT GACAGTGACCTAATGCACGTGAAGCCTCAGCATGAACAGAGAAAGGAGCAGGAGCCAAAAAAGACCTCACATTAAG AAGCCTCTGAATGCTTTTATGTTATACATGAAAGAAATGAGAGCGAATGTCGTTGCTGAGTGTACTCTAAAAGAA AGTGCAGCTATCAACCAGATTCTTGGCAGAAGGTGGCATGCCCTCTCCCGTGAAGAGCAGGCTAAATATTATGAA TTAGCACGGAAAGAAAGACAGCTACATATGCAGCTTTATCCAGGCTGGTCTGCAAGAGACAATTATGGTAAGAAA AAGAAGAGGAAGAGAAACTACAGGAATCTGCATCAGGTACAGGTCCAAGAATGACAGCTGCCTACATCTGA

GTGAACATGGTATCACCATTGATATCTCTTTGTGGAAATTTGAGACCAGCAAGTACTATGTGACTATCATTGATG
CCCCAGGACACAGAGACCTCATCAAAAACATGATTACAGGGACATCTCAGGCTGACTGTGCTGTCTTGATTGTTG
CTGCTGGTTTTGGTGAATTTGAAGCTGGTATCTCCAAGAATGGGCAGACCCGAGAGCACGCCCTTCTGGCTTACA
CACTGGGTGTGAAACAACTAATTGTTGGTGTTAACAAAATGGATTCCACTGAGCCACCCCTACAGCCATAAGAGAT
ATGAGGAAATTGTTAAGGAAGTCAGCACTTACATTAAGAAAATTGGCCACAACACCGACACAGTAGCATTTGTGC
CAGTTTCTGGTTGGAATGGTGACAACACGCTGGAGCCAAGTGCTAACATGCCTTGGTTCAAGGGATGGAAAGTCA
CCCGTAAGGATGGCAATGCCAGTGGAACCAGCCTGCCTCTCCAGGATGTCTACAAAATTGGTGGTATTGGTACTG
TTCCTGTTGGCTGAGTGGAGACTGGTGTTCTCAAACCTGGTATGGTGCCACCTTTGCTCCAGTCAACGTTGCAA
CAGAAGTAAAATCTGTTGAAATGCACCATGAAGCTTTGAGTGAAGTTCTTCCTGGGGACAATGTGGGCTTCAATG
TCAAGAATGTGTCTGTCAAGGATGTTCGTCGTGGCAACGTTGCTGGTGACAGCAAAAAAGGACCCACCAATGGAAG
CAGCTGGCTTCACTGCTCAGGTGATTATCCTGAACCATCCAGGCCAAATAA

GAAAAATTTGAGAAGGAGGCTGCTGAGATGGGAAAGTGCTCCTTCAAGTATGCCTGGGTCTTGGATAAACTGAAA
GCTGAGCGTGAACATGGTATCACCATTGATATCTCTTTGTGGAAATTTGAGACCAGCAAGTACTATGTGACTATC
ATTGATGCCCCAGGACACAGAGACCTCATCAAAAACATGATTACAGGGACATCTCAGGCTGACTGTGCTGTCTTG
ATTGTTGCTGCTGGTTTTGGTGAATTTGAAGCTGGTATCTCCAAGAATGGGCAGACCCGAGAGCACGCCCTTCTG
GCTTACACACTGGGTGTGAAACAACTAATTGTTGGTGTTAACAAAATGGATTCCACTGAGCCACCCTACAGCCAT
AAGAGATATGAGGAAATTGTTAAGGAAGTCAGCACTTACATTAAGAAAATTGGCCACCAACACCGACACAGTAGCA
TTTGTGCCAGTTTCTGGTTGGAATGGTGACAACACGCTGGAGCCAACACCGACACCCAACAC
AAAGTCACCCGTAAGGATGGCAATGCCAGTGGAACCACGCTGCTTGAGGCTCTTGACTGCATCCTACCACCAACT
CGTCCAACTGACAAGCCCTTGTGCCTGCCTCTCCAGGATGTCTACAAAATTGGTGGTATTGGTACTGTTCCTGTT
GGCTGAGTGGAGACTGGTGTTCTCAAACCTGGTATGGTGGTCACCTTTGCTCCAGCTAACATGAAAGTA
AAATCTGTGTCAAGGATGTTCGTCGTGGCAACGTTGCTGGTGACAGCAAAAAGGACCCCCCAATGGAAGCAGCTG
GCTTCACTGCTCAGGTGATTATCCTG

1594/6881 FIGURE 1474A

TGCAGTGATTGTGATTCTCATCCTGGTGTGGGAAGGAATCCCGCTGTCTCTGGCTGACAAACTCTACTCGGAGCT TCAGGGGCTGGATCCAGAAACCTGTGGTGCCTCCTTCTCTTTTGGTTGTTCATGGAGCATGTACTACAATGGATG TAAGTTTGCCAGAAGCAAGATCCCAAGGAAGTTTAAGCTGCTTGGGGATGACCCAAAAGAGGAAAGAAGAAACTGGA GTCTCATTTGCAAAACCTGTCCACTCTTATGGCACCAACATATAAGAAACTTGCACCTGATGCATATAATAATCA ATGTTTGGACTTCTGTGCTCATGCCCACAGAGACTTGCACAACATGCAGAATGGCAGCACATTGGTATGCACTCT CACTAGAGAAGACAATCGAGAATTTGGAGGAAAACCTGAGGATGAGCAGCTTCACGTTCTGCCTTTATACAAAGT CTCTGACGTGGATGAGTTTGGGAGTGTGGAAGCTCAGGAGGAGAAAAAACGGAGTGGTGCCATTCAGGTACTGAG TTCTTTTCGGCGAAAAGTCAGGATGTTAGCAGAGCCAGTCAAGACTTGCCGACAAAGGAAACTAGAAGCCAAGAA AGCTGCAGCTGAAAAGCTTTCCTCCCTGGAGAACAGCTCAAATAAAAATGAAAAGGAAAAGTCAGCCCCATCACG TACAAAACAAACTGAAAACGCAAGCCAGGCTAAACAGTTGGCAGAACTTTTGCGACTTTCAGGACCAGTCATGCA GCCACATCACCCTCAGACAGAGTCTGTCAACTCTTATTCTGCTTCTGGATCCACCAATCCATACATGAGACGGCC CAATCCAGTTAGTCCTTATCCAAACTCTTCACACACTTCAGATATCTATGGAAGCACCAGCCCTATGAACTTCTA TTCCACCTCATCTCAAGCTGCAGGTTCATATTTGAATTCTTCTAATCCCATGAACCCTTACCCTGGGCTTTTGAA TCAGAATACCCAATATCCATCATATCAATGCAATGGAAACCTATCAGTGGACAACTGCTCCCCATATCTGGGTTC CTATTCTCCCCAGTCTCAGCCGATGGATCTGTATAGGTATCCAAGCCCAAGACCCTCTGTCTAAGCTCAGTCTACC ACCCATCCATACACTTTACCAGCCAAGGTTTGGAAATAGCCAGAGTTTTACATCTAAATACTTAGGTTATGGAAA CCAAAATATGCAGGGAGATGGTTICAGCAGTTGTACCATTAGACCAAATGTACATCATGTAGGGAAATTGCCTCC TTATCCCACTCATGAGATGGATGGCCACTTCATGGGAGCCACCTCTAGATTACCACCCAATCTGAGCAATCCAAA CATGGACTATAAAAATGGTGAACATCATTCACCTTCTCACATAATCCATAACTACAGTGCAGCTCCGGGCATGTT CAACAGCTCTCTTCATGCCCTGCATCTCCAAAACAAGGAGAATGACATGCTTTCCCACACAGCTAATGGGTTATC AAAGATGCTTCCAGCTCTTAACCATGATAGAACTGCTTGTGTCCAAGGAGGCTTACACAAATTAAGTGATGCTAA TGGTCAGGAAAAGCAGCCATTGGCACTAGTCCAGGGTGTGGCTTCTGGTGCAGAGGACAACGATGAGGTCTGGTC AGACAGCGAGCAGAGCTTTCTGGATCCTGACATTGGGGGGAGTGGCCGTGGCTCCAACTCATGGGTCAATTCTCAT TGAGTGTGCAAAGCGTGAGCTGCATGCCACAACCCCTTTAAAGAATCCCAATAGGAATCACCCCACCAGGATCTC CCTCGTCTTTTACCAGCATAAGAGCATGAATGAGCCAAAACATGGCTTGGCTCTTTGGGAAGCCAAAATGGCTGA AAAAGCCCGTGAGAAAGAGGAAGAGTGTGAAAAGTATGGCCCAGACTATGTGCCTCAGAAATCCCATGGCAAAAA AGTGAAACGGGAGCCTGCTGAGCCACATGAAACTTCAGAGCCCACTTACCTGCGTTTCATCAAGTCTCTTGCCGA AAGGACCATGTCCGTGACCACAGACTCCACAGTAACTACATCTCCATATGCCTTCACTCGGGTCACAGGGCCTTA ATAGTTCTCATGACGTGGGCAGTGGGGAAAGGTCACAGTATTCATGACAAATGTGGTGGGAAAAACCTCAGCTCA CCAGCAACAAAAGAGGTTATCTTACCATAGCACTTAATTTTCACTGGCTCCCAAGTGGTCACAGATGGCATCTAG GAAAAGACCAAAGCATTCTATGCAAAAAGAAGGTGGGGAAGAAAGTGTTCCGCAATTTACATTTTAAACACTGG TTTAATAATATCAAGTTTGCATAGTCATGGAACACAAATCAAACAAGTACTGTAGTATTACAGTGACAGGAATCT TAAAATACCATCTGGTGCTGAATATATGATGTACTGAAATACTGGAATTATGGCTTTTTGAAATGCAGTTTTTAC GTTCTAAGAAATGGTGCTAAGAAAATGGTGTCTTTAATAGCTAAAAATTTAATGCCTTTATATCATCAAGATGCT CACAAGCTTAGTTTTTAAAATGTGGACATTTTAAAGGCCTCTGGATTTTGCTCATCCAGTGAAGTCCTTGTAGGA CAATAAACGTATATATGTACATATATACACAAACATGTATATGTGCACACACGTATATATGTATAAATATTTTAA ATGGTGTTTTAGAAGCACTTTGTCTACCTAAGCTTTGACAACTTGAACAATGCTAAGGTACTGAGATGTTTAAAA CTTTTAGCCATGCATCTGCTGATGAGCAATTGTGTCCATTTTTAACACAGCCAGTTAAATCCACCATGGGGCTTA CTGGATTCAAGGGAATACGTTAGTCCACAAAACATGTTTTCTGGTGCTCATCTCACATGCTATACTGTAAAACAG

1595/6881 FIGURE 1474B

TTTTATACAAAATTGTATGACAAGTTCATTGCTCAAAAATGTACAGTTTTAAGAATTTTCTATTAACTGCAGGTA ATAATTAGCTGCATGCTGCAGACTCAACAAAGCTAGTTCACTGAAGCCTATGCTATTTTATGGATCATAGGCTCT TCAGAGAACTGAATGGCAGTCTGCCTTTGTGTTGATAATTATGTACATTGTGACGTTGTCATTTCTTAGCTTAAG TGTCCTCTTTAACAAGAGGATTGAGCAGACTGATGCCTGCATAAGATGAATAAACAGGGTTAGTTCCATGTGAAT CTGTCAGTTAAAAAGAAACAAAAACAGGCAGCTGGTTTGCTGTGGTGGTTTTAAATCATTAATTTGTATAAAGAA GTGAAAGAGTTGTATAGTAAATTAAATTGTAAACAAAACTTTTTTAATGCAATGCTTTAGTATTTTAGTACTGTA GATGGTGCTACTCAGCCTGCTACAAATATATCATAATGTGAGCTAAGAATTCATTAAATGTTTGAGTGATGTTCC TACTTGTCATATACCTCAACACTAGTTTGGCAATAGGATATTGAACTGAGAGTGAAAGCATTGTGTACCATCATT AACTTGAACTTCAACCTTTTTGTTCTAAAAATTCAGGGATATTTCAGCTCATGCTCTCCCTATGCCAACATGTCA CCTGTGTTTATGTAAAATTGTTGTAGGTTAATAAATATATTCTTTGTCAGGGATTTAACCCTTTTATTTTGAATC CCTTCTATTTTACTTGTACATGTGCTGATGTAACTAAAACTAATTTTGTAAATCTGTTGGCTCTTTTTATTGTAA CTCTCTAAATGAAGTTTTTTTGATCCTGTAATCACTGAAGGTACATACTCCATGTGGACTTCCCTTAAACAGGCA AACACCTACAGGTATGGTGCGACAGATTGTACAATTACATTTTGGCCTAAATACATTTTTGCTTACTAGTATT TAAAATAAATTCTTAATCAGAGGAGGCCTTTGGGTTTTATTGGTCAAATCTTTGTAAGCTGGCTTTTGTCTTTTT AAAAAATTTCTTGAATTTGTGGTTGTGCCAATTTGCAAACATTTCCAAAAATGTTTGCTŢTGCTTACAAACCAC ATGATTTTAATGTTTTTTGTATACCATAATATCTAGCCCCAAACATTTGATTACTACATGTGCATTGGTGATTTT GATCATCCATTCTTAATATTTGATTTCTGTGTCACCTACTGTCATTTGTTAAACTGCTGGCCAACAAGAACAGGA AGTATAGTTTGGGGGGGTTGGGGAGAGTTTACATAAGGAAGAAGAAATTGAGTGGCATATTGTAAATATCAGAT TGATTGACGCACAGTGATGTACAGTTCACTTCTGAAGCTAGTGGTTAACTTGTGTAGGAAACTTTTGCAGTTTGA CACTAAGATAACTTCTGTGTGCATTTTTCTATGCTTTTTTAAAAACTAGTTTCATTTCATTTCATGAGATGTTT GGTTTATAAGATCTGAGGATGGTTATAAATACTGTAAGTATTGTAATGTTATGAATGCAGGTTATTTGAAAGCTG

MAPTYKKLAPDAYNNQIEYEHRAPECRLGLKEGRPFSGVTACLDFCAHAHRDLHNMQNGSTLVCTLTREDNREFG
GKPEDEQLHVLPLYKVSDVDEFGSVEAQEEKKRSGAIQVLSSFRRKVRMLAEPVKTCRQRKLEAKKAAAEKLSSL
ENSSNKNEKEKSAPSRTKQTENASQAKQLAELLRLSGPVMQQSQQPQPLQKQPPQPQQQQRPQQQQPHPQTESV
NSYSASGSTNPYMRRPNPVSPYPNSSHTSDIYGSTSPMNFYSTSSQAAGSYLNSSNPMNPYPGLLNQNTQYPSYQ
CNGNLSVDNCSPYLGSYSPQSQPMDLYRYPSQDPLSKLSLPPIHTLYQPRFGNSQSFTSKYLGYGNQNMQGDGFS
SCTIRPNVHHVGKLPPYPTHEMDGHFMGATSRLPPNLSNPNMDYKNGEHHSPSHIIHNYSAAPGMFNSSLHALHL
QNKENDMLSHTANGLSKMLPALNHDRTACVQGGLHKLSDANGQEKQPLALVQGVASGAEDNDEVWSDSEQSFLDP
DIGGVAVAPTHGSILIECAKRELHATTPLKNPNRNHPTRISLVFYQHKSMNEPKHGLALWEAKMAEKAREKEEEC
EKYGPDYVPQKSHGKKVKREPAEPHETSEPTYLRFIKSLAERTMSVTTDSTVTTSPYAFTRVTGPYNRYI

FIGURE 1476

AGGCACAGGCAGCCTGCATACACTCCTTTTCCTGGTGTCAACATTATTTAAAAGCATGGGAAATAGTAATGAGAC AGTGTCTTCTTCATTAGAACCTTAGGAGTCTACTAGATTTCTTCATCTCTATTTGTTGTTATTAGTAGCCAAACT GTGCAAAAAACACGGTCTTGAGAAATGACAGCACAGTATCTTAGAGGGAAAGGAAATGTAGGATGCCAGTGTGGG GACAAATTTCTGATTGCCAGTGATTGTTGTGAGCATAACAATAATTTCATGAACATTAAAGCCTCTATTGAGGGC TAAACAGAAAAAATTTAAACTTTGCTAAAAAAAAAAGCAGAAGCACTTGATCTTTAGGAAGGCACGCAGTTGC TTATTATGAATCATTTCTAGAGTCCGATGCATTTTCAAAGCCGGTTACAGTCATTACGAAGCACACCCTTGTGAG GTAAGTGTATCATCACCTTTGGTTCATAAATAAAAAGCTGAGACGCCGAGCGATTAAGTCACTCGCCTAAGGAG AATGAGTCAACGTCAAGAGTCATAGTTGACCCGGCCTAAAGACTCCAGACCATCAGTCCAGGGCTTAGTCAGCGG GGCCCGGAGTGGCTTCCCTGGCTGGCATCTGGACTTAGGCTATTTCCGTGCACGTAAAAGCGGAATATTGGAACG GTTGCACAGAACTTCCAAATAATTTTTACCGCCACGCAAGATTTAGCCCTGAGGTCTTAATCTCAGGATTTGGGA TTCGCAGAAATGGCAACGAATGACCACCAGCATTAGCTGAGCCAGGGGACGTGGGAGGGTTGATTGCCTAAACGA GGGAAGATGGGAGGACAGGGCGACAAAGGGCACAGTAGGCTTGCCTGGCAGTAAGTGTGACCGCAGCTATCCAGG CGGAAGAGCAGAGGACTGAAACCACCCTCCAGCAAGCGAGTGTCCGCCGCGTTGAGAACCGCGCACCCTACCCAT ACTCCACTTCCCAGAAGCCTCTCGTTACTCACGCAGCCGCAGTCTTGCGCAGGTGCCGCCAGGGCCAAACGGACA TATCCGTCACGTGGCCAGAAGCTGGCCAATCCGGTTTGAATCTCATTTTTTTCCTCTTACCCCCCCTTCTGGAGC GGTTGTGCGATCAGATCGATCTAAGATGGCGACTGTCGAACCGGAAACCACCCCTACTCCTAATCCCCCGACTAC AGAAGAGGAGAAAACGGAATCTAATCAGGAGGTTGCTAACCCAGAACACTATATTAAACATCCCCTACAGAACAG TACTGTTGAAGACTTTTGGGCTCTGTACAACCATATCCAGTTGTCTAGTAATTTAATGCCTGGCTGTGACTACTC GAACAAACAGCAGAGACGAAGTGACCTCGATCGCTTTTGGCTAGAGACACTTCTGTGCCTTATTGGAGAATCTTT TGATGACTACAGTGATGATGTGTGGCGCTGTTGTTAATGTTAGAGCTAAAGGTGATAAGATAGCAATATGGAC GATAGTGATTGGTTATCAGTCCCACGCAGACACAGCTACTAAGAGCGGCTCCACCACTAAAAATAGGTTTGTTGT TTAAGAAGACACCTTCTGAGTATTCTCATAGGAGACTGCGTCAAGCAATCGAGATTTGGGAGCTGAACCAAAGCC TCTTCAAAAAGCAGAGTGGACTGCATTTAAATTTGATTTCCATCTTAATGTTACTCAGATATAAGAGAAGTCTCA AATTACAGTACACATCCCCAGAATCCATAAATGTGTTCCTGGCCCACTCTGTAATAGTTCAGTAGAATTACCATT TTCTGTTGTTCCATTTTATGCAGAAGCATATTTTGCTGGTTTGAAAGATTATGATGCATACAGTTTTCTAGCAAT CCCTACTTGATAATATTAGTGATTCTGATTTCAGTTTTTCATTTTGTTTTTGTTTTTTCCTCATGTAACA CCTAAACATAATTGTGGATTATAAAAAATGTAACATCATAATTACATTCCTAACTAGAATTAGTATGTCTGTTTT TGTATCTTTATGCTGTATTTTAACACTTTGTATTACTTAGGTTATTTTGCTTTGGTTAAAAATGGCTCAAGTAGA ATGTCTTCTTTTGTGGTGTCTTCCATGTGAACAGCATAAGTTTGGAGCACTAGTTTGATTATTATGTTTATTACA ATTTTTAATAAATTGAATAGGTAGTATCATATATATGGA

TCGCTAGGCGCTCGCCACGCCATGCCTCCGTCGCTGCGCGCCCACCCCGGATGTCAGCCCCCCGCGCCGACCA GAATCCGTGAACATGGCGAACGAGGTTATCAAGTGCAAGGCTGCAGTTGCTTGGGAGGCTGGAAAGCCTCTCTCC ATAGAGGAGATAGAGGTGGCACCCCCAAAGGCTCATGAAGTTCGAATCAAGATCATTGCCACTGCGGTTTGCCAC ACCGATGCCTATACCCTGAGTGGAGCTGATCCTGAGGGTTGTTTTCCAGTGATCTTGGGACATGAAGGTGCTGGA ATTGTGGAAAGTGTTGGTGAGGGAGTTACTAAGCTGAAGGCGGGTGACACTGTCATCCCACTTTACATCCCACAG TGTGGAGAATGCAAATTTTGTCTAAATCCTAAAACTAACCTTTGCCAGAAGATAAGAGTCACTCAAGGGAAAGGA TTAATGCCAGATGGTACCAGCAGATTTACTTGCAAAGGAAAGACAATTTTGCATTACATGGGAACCAGCACATTT TCTGAATACACAGTTGTGGCTGATATCTCTGTTGCTAAAATAGATCCTTTAGCACCTTTGGATAAAGTCTGCCTT CTAGGTTGTGGCATTTCAACCGGTTATGGTGCTGCTGTGAACACTGCCAAGTTGGAGCCTGGCTCTGTTTGTGCC GTCTTTGGTCTGGGAGGAGTCGGATTGGCAGTTATCATGGGCTGTAAAGTGGCTGGTGCTTCCCGGATCATTGGT GTGGACATCAATAAAGATAAATTTGCAAGGGCCAAAGAGTTTGGAGCCACTGAATGTATTAACCCTCAGGATTTT AGTAAACCCATCCAGGAAGTGCTCATTGAGATGACCGATGGAGGAGTGGACTATTCCTTTGAATGTATTGGTAAT GTGAAGGTCATGAGAGCAGCACTTGAGGCATGTCACAAGGGCTGGGGCGTCAGCGTCGTGGTTGGAGTAGCTGCT TCAGGTGAAGAAATTGCCACTCGTCCATTCCAGCTGGTAACAGGTCGCACATGGAAAGGCACTGCCTTTGGAGGA TGGAAGAGTGTAGAAAGTGTCCCAAAGTTGGTGTCTGAATATATGTCCAAAAAGATAAAAGTTGATGAATTTGTG ACTCACAATCTGTCTTTTGATGAAATCAACAAAGCCTTTGAACTGATGCATTCTGGAAAGAGCATTCGAACTGTT CTAGTTTATTAAGGAATATTTTAACATAATAAAAGTAATTTCTACATTTGTGTGGAAATTGTCTTGTTTTATGCT GTCATCATTGTCACGGTTTGTCTGCCCATTATCTTCATTCTGCAAGGGAAAGGGAAAGGAAGCAGGGCAGTGGTG GGTGTCTGAAACCTCAGAAACATAACGTTGAACTTTTAAGGGTCTCAGTCCCCGTTGATTAAAGAACAGATCCTA GCCATCAGTGACAAAGTTAATCAGGACCCAAGTCTGCTTCTGTGATATTATCTTGAAGGGAGGTACTGTGCCTTG TTCATACCTGTACCCCAAATTCCTAGGATGGCATCTGCCCTTCAGGGGGCACTAAAATGTATTATTGAAACAGCA TTCTGGGCTTAAATAGGTGTATGTATGTGTTGGTTGTGACTGTACTATTTCTAGTATAGTGAACTACATACTGAA TATCCAAGTTCTCAGCACCTACTTTTGTCAAATCTTAACATTTTGCCACTTCGAGATCACATTGCCATTCCTCCC CTCCAGAGGTAACAATTATCCACAATTTGATGTTTATCATTCCTGTGTTGTTGTACTTTCACTGTGTATAACCTA AACCATCTACTCTTTAGTACTGTTTTATATTTTTTAAGCCTCATACTTGCTCATTCTACAGCTTTTTTCACTCA TTATTGTATAATTATATCTGAAGCTCTCGTTCATTAATTTTAGTCCTGTGTAGCAGAATTCAATTACGGGAACTA CCATAATTTATCTGTTCTCCAGTTGAAGGCATGAAGTTGTTGCCAGTTTCTGTATTATAACACTGTAGTGGAACA TTCTTCTGCATTGGGCTCACTGCGTGTTACCTAAGACGTATCACAGAATAAACACATTTAGCCTTATAGACATTG ${\tt CCAAATTGCTCTTCAAAGTAAATGTGAGTTTTTGTGAATTACATGAGTATGGAATGGTGTTTTATTATGACTTTA}$ GTTTGCATTTTCCTCAA

 ${\tt MAGGKAGKDSGKAKTKAVSRSQRAGLQFPVGRIHRHLKSRTTSHGRVGATAAVYSAAILEYLTAEVLELAGNASK}\\ {\tt DLKVKRITPRHLQLAIRGDEELDSLIKATIAGGGVIPHIHKSLIGKKGQQKTV}$

 ${\tt MLKGKKAKGKKVAPAPAVVKKQEAKKVVNPLFEERPKNFGIGQDIQPKRDLTRFVKWPRYIRLQQQRAILYKRLKVPPAINQFTQALDRQTATQLLKLAHKYRPETKQEKKAVGPGREESCWQRGRPHQETTCPLSSWLSSCLPYVVKWWSLSALSRGRQDWDVSSTGRPAPLSPSHR$

FIGURE 1483

 $\underline{\textbf{TG}} \texttt{GCGCTGCAGCTCTCCCGGGAGCAGGGAATCACCCTGCGCGGGAGCGCCGAAATCGTGGCCGAGTTCTTCTCAT}$ TCGGCATCAACAGCATTTTATATCAGCGTGGCATATATCCATCTGAAACCTTTACTCGAGTGCAGAAATACGGAC TCACCTTGCTTGTAACTACTGATCTTGAGCTCATAAAATACCTAAATAATGTGGTGGAACAACTGAAAGATTGGT TATACAAGTGTTCAGTTCAGAAACTGGTTGTAGTTATCTCAAATATTGAAAGTGGTGAGGTCCTGGAAAGATGGC AGTTTGATATTGAGTGTGACAAGACTGCAAAAGATGACAGTGCACCCAGAGAAAAGTCTCAGAAAAGCTATCCAGG ATGAAATCCGTTCAGTGATCAGACAGATCACAGCTACGGTGACATTTCTGCCACTGTTGGAAGTTTCTTGTTCAT TTGATCTGCTGATTTATACAGACAAAGATTTGGTTGTACCTGAAAAATGGGAAGAGTCGGGACCACAGTTTATTA CCAATTCTGAGGAAGTCCGCCTTCGTTCATTTACTACTACAATCCACAAAGTAAATAGCATGGTGGCCTACAAAA ${\tt TTCCTGTCAATGAC} {\tt TGA} {\tt GGATGACATGAGGAAAATAATGTAATTGTAATTTTGAAATGTGGTTTTCCTGAAATCA}$ CTGTGTGTAATTGTTCCTTTATTTTTTGGTACCTATTTGACTTACCATGGAGTTAACATCATGAATTTATTGCA CATTGTTCAAAAGGAACCAGGAGGTTTTTTTGTCAACATTGTGATGTATATTCCTTTGAAGATAGTAACTGTAGA TGGAAAAACTTGTGCTATAAAGCTAGATGCTTTCCTAAATCAGATGTTTTGGTCAAGTAGTTTGACTCAGTATAG GTAGGGAGATATTTAAGTATAAAATACAACAAAGGAAGTCTAAATATTCAGAATCTTTGTTAAGGTCCTGAAAGT AACTCATAATCTATAAACAATGAAATATTGCTGTATAGCTCCTTTTGACCTTCATTTCATGTATAGTTTTCCCTA TTGAATCAGTTTCCAATTATTTGACTTTAATTTATGTAACTTGAACCTATGAAGCAATGGATATTTGTACTGTTT AATGTTCTGTGATACAGAACTCTTAAAAATGTTTTTTCATGTGTTTTTATAAAATCAAGTTTTAAGTGAAAGTGAG

MALQLSREQGITLRGSAEIVAEFFSFGINSILYQRGIYPSETFTRVQKYGLTLLVTTDLELIKYLNNVVEQLKDW LYKCSVQKLVVVISNIESGEVLERWQFDIECDKTAKDDSAPREKSQKAIQDEIRSVIRQITATVTFLPLLEVSCS FDLLIYTDKDLVVPEKWEESGPQFITNSEEVRLRSFTTTIHKVNSMVAYKIPVND

FIGURE 1487

CTGGGATTACAGGTGTGAGCCATCTTGCTCATTTTAGTTTAAACTTTTGAGTGGTTTGTGTCTCCTGATTGGACT GGTTATCCAAGGAGCAGTGCTGAGCTCCTTGCTAATGGGATATGGGATGCTGGTGATTTCCAGGAAGTGACCTCA CAATGACTCAAGCTACCACATACTGTTGATTGTGAAATGCCAGTTGAAGCATATGTCCTGCGAGCTTAGGGGTGC TACAAGTTGACCACTGCAGCAGTAAAGATGACTCTGAAGAATGGCATGGGATGCATCTTTCGAATGCACTTGAG CAGCGGTCTCCAACCACAGGGCCACAGAGCTGGAGCTGGATCTACCATGAAAGACTTCTGAATCCAGGAAGAGAG ACTGACTGGGCAACATGTTATTCAGGTGGGACCATCCAGTTGCAGGAAAACAAGCTTAACATGCCCACTGATTCT ACATTATGCTCCTACCTCCCGGCAGCCTCTCCAGGCCCAGAACTTTCTCCAGTCAGCCTCTACAGACCAAGCTCA TGACTCACAATGGCCTATTTAGGCCCATACCCTACCTCACGGCAGTCTCCGCAGATGAGCCTACTGCCTCACAAC AGCCTCCACAGGCACAGCTCCATCGTTACAATGGCCTCTTTAGACCCAGCTCCTGCCTCCCAGCCTTCTCTCTAG GCCCTGAACTTTCTGAAGTCGACCTCACCAGGCCCAGCTCATGCTTCTTTGCAGCCTCTCCAGGCCCAGCTCCTG CATCTTGGTGGCCCCTCCAGGCCCAGCCTCTGCCTCCCGTCGGCCTCTACAGTCCCAACATCTGCCTCATAGCAG ATTCTTGAGGCCCAGCATCTGCCTCACTGTGGACCCCCAGACCCAGATGGTGTCTCACTGTGGCATCCTCAGGC AAAGCTCCTGCCTTTCGGCAGCCTCTCCAGGCCCAGCTCCTCCTGCCTCCCAGTGGCCTCTTTCGGCCCAGCCCA GCTCATGCCTCCCAGCGCCTTCCCAGGCCCCGCTTTTGACTTTCGGTGGCCTCTGCAGGCCTCGACAAGGCCTG GCCTCCTGCCTCCCGAA

 ${\tt MLLPPGSLSRPRTFSSQPLQTKLMTHNGLFRPIPYLTAVSADEPTASQQPPQAQLHRYNGLFRPSSCLPAFSLGPELSEVDLTRPSSCFFAASPGPPLPPVGLYSPNICLIADS}$

FIGURE 1489

AGGGCCGGGGTGGGGCGCTTCCGTTGCTTGGATCAGTCTAGGTGCAGCTGCGGATCCTTCAGCGTCTGC ATCTCGGCGTCGCCCGCGTACCGTCGCCCGGCTCTCCCGCGGGGGTTCGGGGGCACTTGGGTCCCAC TTCCCTGGATTTGATGAGCGGGCTGATGCAGAAACTCTTCGGAAGGCTATGAAAGGCTTGGGCACAGATGAGGAG AGCATCCTGACTCTGTTGACATCCCGAAGTAATGCTCAGCGCCAGGAAATCTCTGCAGCTTTTAAGACTCTGTTT CCCTCTCGGCTTTATGATGCTTATGAACTGAAACATGCCTTGAAGGGAGCTGGAACAAATGAAAAAGTACTGACA GAAATTATTGCTTCAAGGACACCTGAAGAACTGAGAGCCATCAAACAAGTTTATGAAGAAGAATATGGCTCAAGC CTGGAAGATGACGTGGTGGGGGACACTTCAGGGTACTACCAGCGGATGTTGGTGGTTCTCCTTCAGGCTAACAGA GACCCTGATGCTGGAATTGATGAAGCTCAAGTTGAACAAGATGCTCAGGCTTTATTTCAGGCTGGAGAACTTAAA TGGGGGACAGATGAAGAAAAGTTTATCACCATCTTTGGAACACGAAGTGTGTCTCATTTGAGAAAGGTGTTTGAC AAGTACATGACTATATCAGGATTTCAAATTGAGGAAACCATTGACCGCGAGACTTCTGGCAATTTAGAGCAACTA CTCCTTGCTGTTGTGAAATCTATTCGAAGTATACCTGCCTACCTTGCAGAGACCCTCTATTATGCTATGAAGGGA GCTGGGACAGATGATCATACCCTCATCAGAGTCATGGTTTCCAGGAGTGAGATTGATCTGTTTAACATCAGGAAG GAGTTTAGGAAGAATTTTGCCACCTCTCTTTATTCCATGATTAAGGGAGATACATCTGGGGACTATAAGAAAGCT $\tt CTTCTGCTGCTGTGGAGAAGATGAC\underline{TAA} \tt CGTGTCACGGGGAAGAGCTCCCTGCTGTGTGCCTGCACCACCCCA$ CTGCCTTCCTTCAGCACCTTTAGCTGCATTTGTATGCCAGTGCTTAACACATTGCCTTATTCATACTAGCATGCT AGGCTAGAGTGCTTTTAGCCTTTTTTAAAAACTCCATTTATATTACATTTGTAACCATGATACTTTAATTAGAAG CTTAGCCTTGAAATTGTGAACTCTTGGAAATGTTATTAGTGAAGTTCGCAACTAAACTAAACCTGTAAAATTATG ATGATTGTATTCAAAAGATTAATGAAAAATAAACATTTCTGTCCCCCTGAATTAT

FIGURE 1490

MAQVLRGTVTDFPGFDERADAETLRKAMKGLGTDEESILTLLTSRSNAQRQEISAAFKTLFGRDLLDDLKSELTG KFEKLIVALMKPSRLYDAYELKHALKGAGTNEKVLTEIIASRTPEELRAIKQVYEEEYGSSLEDDVVGDTSGYYQ RMLVVLLQANRDPDAGIDEAQVEQDAQALFQAGELKWGTDEEKFITIFGTRSVSHLRKVFDKYMTISGFQIEETI DRETSGNLEQLLLAVVKSIRSIPAYLAETLYYAMKGAGTDDHTLIRVMVSRSEIDLFNIRKEFRKNFATSLYSMI KGDTSGDYKKALLLLCGEDD

CATAACAAGCCAAACGCCAGACCGAGAGTGCCTCCGTGCGCGAGTGCCCGGTGTGTGCGCGCCGGCGAGAGCAGG CCTCGGCCGAACCCCTCCGCAGCAGGCTGCCTGCTGTTTCCCGGGGAGATC<u>ATG</u>AAACGAGGTCGCCTTCCCAGC AGCAGTGAGGATTCTGACGACAATGGCAGCCTGTCAACTACTTGGTCCCAGAATTCCCGATCCCAGCATAGGAGA AGCTCCTGCTCCAGACATGAAGATCGAAAGCCTTCAGAGGTGTTTAGGACAGACCTGATCACTGCCATGAAGTTG CATGACTCCTACCAGCTGAATCCGGATGAGTACTATGTGTTGGCAGATCCCTGGAGACAGGAATGGGAGAAAGGG GTCCAGGTGCCTGTGAGCCCGGGGACCATCCCTCAGCCTGTGGCCAGGGTTGTGTCTGAAGAGAAATCCCTCATG TICATCAGGCCCAAGAAGTACATCGTGTCATCAGGCTCTGAGCCTCCCGAGTTGGGCTATGTGGACATCCGGACG CTGGCTGACAGCGTGTGTCGCTATGACCTCAATGACATGGATGCTGCATGGCTGGAACTGACCAATGAAGAATTT AAGGAGATGGGAATGCCTGAACTAGATGAATACACCATGGAGAGGGTCCTAGAGGAATTTGAGCAGCGATGCTAC GACAATATGAATCATGCCATAGAGACTGAGGAAGGCCTGGGGATCGAATATGATGAAGATGTTGTCTGTGATGTC TGCCAGTCTCCTGATGGTGAGGACGGCAATGAGATGGTGTTCTGTGACAAATGCAACATCTGTGTGCACCAGGCC TGTTATGGAATCCTCAAGGTACCAGAGGGCAGCTGGCTGTGCCGGACATGTGCCCTGGGGGGTTCAGCCAAAATGT CTGCTGTGTCCGAAGAAGGGTGGAGCTATGAAGCCCACCCGTAGCGGAACCAAGTGGGTCCACGTTAGCTGTGCT $\tt CTGTGGATCCCTGAGGTGAGCATTGGCAGCCCAGAGAAGATGGAGCCCATCACCAAGGTGTCACACATTCCCAGC$ ${\tt AGCCGGTGGGCGCTAGTGTGCAGCCTCTGCAATGAGAAGTTTGGGGCCTCTATACAGTGCTCTGTGAAGAACTGC}$ CGCACAGCCTTCCATGTGACCTGTGCTTTTGACCGGGGCCTGGAGATGAAGACCATCTTAGCAGAGAATGATGAA GTCAAGTTCAAGTCCTATTGCCCAAAGCACAGCTCACATAGGAAACCCGAGGAGAGTCTTGGCAAGGGGGCTGCA CAGGAGAATGGGGCCCCTGAGTGTTCCCCCCGGAATCCGCTGGAGCCCTTTGCCAGCCTTGAGCAGAACCGGGAG GAGGCCCACCGGGTGAGTGTCCGTAAGCAGAAGCTGCAGCAGTTGGAGGATGAGTTCTACACCTTCGTCAACCTG CTGGATGTTGCCAGGGCTCTGCGGCTGCCTGAGGAAGTAGTGGATTTCCTGTACCAGTACTGGAAGTTGAAGAGG AAGGTCAACTTCAACAAGCCCCTGATCACCCCAAAGAAGATGAAGAGGACAATCTAGCCAAGCGGGAGCAGGAT GTCTTATTTAGGAGGCTGCAGCTGTTCACGCACCTGCGGCAGGACCTGGAGAGGGTAATGATTGACACTGACACC TCTCAGACCCTTGTACACCACCACAGCATGAGGTTGTTGTTGGTTAAAAATATTTATGGGCTGGTAAACTCATTGTA TTTACTGTTTTGTAAGATCAAATGGGGTGTGTCTTCCCCACCCCCATTCCTTCATTCTAGAGCTAGAGTGAATGA GCCCCAAGAAAATGACCCAAGGAGTTGACTCAGGATGGTTTACAGACTGATTTAGAAAAACCAGAACGGATTTCAT TTCTAATGGAGGGGCCAGAGATGGGAAAATTTCTTGTTCAGTCCGGGGAAACACACCTAGGTGCTGGTGATGGG CTTATGAAGGAAGCTAAGCACGGCTGCTCACTGGCCCCCACTTTGTTTCTTGGGTAATTCACAGGGGAATTCCCA GGCTGTTGGCTGCCGAGCCTCAGCTGCTGGCATTTCCTTCTGCTGTTTTGCTGCTTTTTGTGCCTCCCCCACTTTCC ATCACCTCTGGAGTCCCGTCTGGACGTCCCTTCCTGCTACAGGAATAATGAGGCGTGGGCTGCCTCCCGCTAGGG CTGATCTCATGGAGACCTGCATGGCCCTGTTAGAGATGGCGTAGAAGTGAAAGTCTTAAAGGGAGCATTAGAGAT CCTTTTAATACACGACTGAGTGCCAGCTTATTTGTGATGCCCCTTCCCAGACCAGGTTAGGATTCCTGGGAAGGC ATTGAGAAGGATAAACTGGAATCCTGGTAAGAAGCCTTTATGCCAGCCCGACACCTGCTGTAATTGGGGTGCATG AGCTATGGAGTCAGATAGTTGTTGGGAGGGGGGGGAGACAAGAAGTCTATTGTTTGGACTGTGTTTGTCTCACAATC ACCACAAAATAAAAGTGTAGAAAATGCTTGTGGTGTACTAACTCTTTTCTGTACTTAAGTTACTCAGATTAACAT GCACTTCTAATTCTAAACATTTTTTTTGGAGTCATCACTGTCGCTGTTTAAGTAGAACAATGCCAACGATGTATG AGAAACAGGGAATAAATCAGGATTTGTGTGTGT

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AGGAAATGAGGCTGAACTTTGTAGTGCCCTCGCTAACCTTCAGACCAGTAAACCAGATGCTGTAGAGCAGACATG TATATTGGAATCTACAGAAATTGCTTTGCTTAACAACATCCCATATCATGAAGGCTTTAAAATGGCAATGAGCAA AGTTTTGTCTTCACTGACTCCAGAGAAACTGTATCAGACCATGGATACTCACTGTCAGAATGAGATGAGCTCTGG AACTGGACAGAGTAATACTGTACAGAACATCCTTGAACCTTTCTACGTGTTAGATGTGTCCGAAGGCTTCTCTGT TCTGCCTGTTATTGCTGGCACACTTGGGCAGGTTAAACCATACAGTTCTGTGGAGAAAGACCAGCATCGTATTGC TCTGGACCTCATATCTGAAGCCAATCACTTTCCTAAAGAAACACTTGAGTTTTGGCTGAGACATGTGGAGGATGA ATCTGCTATGTTACAAAGGCCAAAATCAGACAAGTTATGGAGCATAATTATATTGGATGTCATTGAGCCATCTGG GCTCATTCAGCAGGAAATAATGGAAAAAGCTGCAATATCCAGGTGTTTACTACAATCTGGAGGCAAGATCTTTCC TCAGTATGTGCTGATGTTTGGGTTGCTTGTGGAATCACAGACACTCCTAGAGGAGAATGCTGTTCAAGGAACAGA ACGTACTCTTGGATTAAATATAGCACCTTTTATTAACCAGTTTCAGGTACCTATACGTGTATTTTTGGACCTATC CTCATTGCCCTGTATACCTTTAAGCAAGCCAGTGGAACTCTTAAGACTAGATTTAATGACTCCGTATTTGAACAC CCTTGATGAAGAGATTAGGTTGGATACTTCAAGTGAAGCCTCCCACTGGAAACAAGCTGCAGTTGTTTTAGATAA TCCCATCCAGGTTGAAATGGGAGGAACTTGTACTCAGCATTCAGCATCACAAAAGCAATGTCAGCATCACAGT AAAGCAATGAAGAGCAGTTTTCCAATGAAAACTGTGTAAATAGAGCATCAACAAGTACAAAATTCTTGTCTTAAT TAGTGGGGGTATATAAAAATTCCTTGTAATGGTCAAATATTTTTTAAAATTGACATTAATAAAGCATATTTTAAA AGATTCTAAATAAAAGGGTAGCATTATTATAGAAATACTGCTGCAGATTTGCTTTCTGGAAAAGGATACATCACT AGTTTTTTAAATTAGGAAACTTCTTTTGCTCGATTTTACAGAATAGGGATTTTAAAAGTCTTATCGTTATTGACA TGTGTAAGTAAAGCAAAACTTTACTTTTGTAGGCATCTTGGCCTTTTTTCTTAAATCCAAACTTGTAATTGGGAA ACACTGAAAGGCTTCCACTGAAGACTGAGGGTTATGGTTACCTGTAAATTCCAATCTTGCTTCCTTTAAATACTC AGTGTACATCTGAAACATCTCAGGTTTTGTTTTGAGAATGCAAGCTTGAAAAAGAATTTAAGCTATAAGCTAAAAT GTAATTAAAACAGTAAAGGAGTTAGGGAATACATCTTCAGGAGGCAGCATTTTTCTTGGTCTACTTTGGCAAAAG ATTTGGATGTACAATAAGTACATTAATTGATCCAATTTTTACAAACTTTTGAAATAAAGGAAGATCATTATTATG CCTCCT

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MAVGKNKRLTKGGKKGAKKKVVDPFSKKDWYDVKAPAMFNIRNIGKTLVTRTQGTKIASDGLKGRVFEVSLADLQ NDEVAFRKFKLITEDVQGKNCLTNFHGMDLTRDKMCSMVKKWQTMIEAHVDVKTTDGYLLRLFCVGFTKKRNNQI RKTSYAQHQQVRQIRKKMMEIMTREVQTNDLKEVVNKLIPDSIGKDIEKACQSIYPLHDVFVRKVKMLKKPKFEL GKLMELHGEGSSSGKATGDETGAKVERADGYEPPVQESV

AAGTCTACATGAAAAGGATGGTTTCTTGGAGCTTCCACAAACTTAAAACCATGAAACATCTATTATTGCTACTAT TGTGTGTTTTTCTAGTTAAGTCCCAAGGTGTCAACGACAATGAGGAGGGTTTCTTCAGTGCCCGTGGTCATCGAC CCCTTGACAAGAAGAGAAGAGGCTCCCAGCCTGAGGCCTGCCCCACCGCCCATCAGTGGAGGTGGCTATCGGG CTCGTCCAGCCAAAGCAGCTGCCACTCAAAAGAAAGTAGAAAAGAAAAGCCCCTGATGCTGGAGGCTGTCTTCACG CTGACCCAGACCTGGGGGTGTTGTGCCTACAGGATGTCAGTTGCAAGAGGCTTTGCTACAACAGGAAAGGCCAA TCAGAAATAGTGTTGATGAGTTAAATAACAATGTGGAAGCTGTTTCCCAGACCTCCTCTTCTTCCTTTCAGTACA TGTATTTGCTGAAAGACCTGTGGCAAAAGAGGCAGAAGCAAGTAAAAGATAATGAAAATGTAGTCAATGAGTACT CCTCAGAACTGGAAAAGCACCAATTATATATAGATGAGACTGTGAATAGCAATATCGCAACTAACCTTCGTGTGC TTCGTTCAATCCTAGAAAACCTGAGAAGCAAAATACAAAAGTTAGAATCTGATGTCTCAGCTCAAATGGAATATT GTCGCACCCCATGCACTGTCAGTTGCAATATTCCTGTGGTGTCTGGCAAAGAATGTGAGGAAATTATCAGGAAAG GAGGTGAAACATCTGAAATGTATCTCATTCAACCTGACAGTTCTGTCAAACCGTATAGAGTATACTGTGACATGA ATACAGAAAATGGAGGATGGACAGTGATTCAGAACCGTCAAGACGGTAGTGTTGACTTTGGCAGGAAATGGGATC CATATAAACAGGGATTTGGAAATGTTGCAACCAACACAGATGGGAAGAATTACTGTGGCCTACCAGGTGAATATT GGCTTGGAAATGATAAAATTAGCCAGCTTACCAGGATGGGACCCACAGAACTTTTGATAGAAATGGAGGACTGGA AAGGAGACAAAGTAAAGGCTCACTATGGAGGATTCACTGTACAGAATGAAGCCAACAAATACCAGATCTCAGTGA CCATTCACAACGGCATGTTCTTCAGCACGTATGACAGAGACAATGACGGCTGGTTAACATCAGATCCCAGAAAAC AGTGTTCTAAAGAAGACGGTGGTGGATGGTGGTATAATAGATGTCATGCAGCCAATCCAAACGGCAGATACTACT CATGGTACTCAATGAGGAAGATGAGTATGAAGATCAGGCCCTTCTTCCCACAGCAA<u>TAG</u>TCCCCAATACGTAGAT AAAACTCTCAAGCAGACGTGAGTGTGACTTTTTGAAAAAAGTATAGGATAAATTACATTAAAATAGCACATGATT TTCTTTTGTTTTCTTCATTTCTCTTGCTCACCAAGAAGTAACAAAAGTATAGTTTTGACAGAGTTGGTGTTCATA ATTTCAGTTCTAGTTGATTGCGAGAATTTTCAAATAAGGAAGAGGGGTCTTTTATCCTTGTCGTAGGAAAACCAT GACGGAAAGGAAAAACTGATGTTTAAAAGTCCACTTTTAAAACTATATTTATGTAGGATCTGTCAAAGAAA ACTTCCAAAAAGATTTATTAATTAAACCAGACTCTGTTGCAAT

MKRMVSWSFHKLKTMKHLLLLLLCVFLVKSQGVNDNEEGFFSARGHRPLDKKREEAPSLRPAPPPISGGGYRARP
AKAAATQKKVERKAPDAGGCLHADPDLGVLCPTGCQLQEALLQQERPIRNSVDELNNNVEAVSQTSSSSFQYMYL
LKDLWQKRQKQVKDNENVVNEYSSELEKHQLYIDETVNSNIATNLRVLRSILENLRSKIQKLESDVSAQMEYCRT
PCTVSCNIPVVSGKECEEIIRKGGETSEMYLIQPDSSVKPYRVYCDMNTENGGWTVIQNRQDGSVDFGRKWDPYK
QGFGNVATNTDGKNYCGLPGEYWLGNDKISQLTRMGPTELLIEMEDWKGDKVKAHYGGFTVQNEANKYQISVNKY
RGTAGNALMDGASQLMGENRTMTIHNGMFFSTYDRDNDGWLTSDPRKQCSKEDGGGWWYNRCHAANPNGRYYWGG
QYTWDMAKHGTDDGVVWMNWKGSWYSMRKMSMKIRPFFPQQ

CTACATGAAAAGGATGGTTTCTTGGAGCTTCCACAAACTTAAAACCATGAAACATCTATTATTGCTACTATTGTG
TGTTTTTCTAGTTAAGTCCCAAGGTGTCAACGACAATGAGGAGGTGAATTTTTTAAAGCATTATTATTATTAG
TAGTATTATTAATATAAGATGTAACATAATCATATTATGTGCTTATTTTAATGAAATTAGCATTGCTTATAGTTA
TGAAATGGAATTGTTAACCTCTGACTTATTGTATTTAAAGAATGTTTCATAGTATTTCTTATATAAGATGGCTTA
GCTAATGTAAGATGTGTTTTTCTCACTTGCTATTCTGAGTACTGTGATTTTCATTTACTTCTAGCAATACAGG

K

1632/6881 FIGURE 1511A

GAAAGACATCAATCTGCCTGCAAAGATTCAGACTGGCCCTTCTGCTCTGATGAAGACTGGAACTACAAATGCCCT TCACTATTTGAATATCAGAAGAACAATAAGGATTCTCATTCGTTGACCACTAATATAATGGAAATTTTGAGAGGC GATTTTTCCTCAGCCAATAACCGTGATAATACCTACAACCGAGTGTCAGAGGATCTGAGAAGCAGAATTGAAGTC ATGAAACGACTGGAGGTGGACATTGATATTAAGATCCGATCTTGTCGAGGGTCATGCAGTAGGGCTTTAGCTCGT AGAGATAGGCAACACTTACCACTGATAAAAATGAAACCAGTTCCAGACTTGGTTCCCGGAAATTTTAAGAGCCAG CTTCAGAAGGTACCCCCAGAGTGGAAGGCATTAACAGACATGCCGCAGATGAGAATGGAGTTAGAGAGACCTGGT GGAAATGAGATTACTCGAGGAGGCTCCACCTCTTATGGAACCGGATCAGAGACGGAAAGCCCCAGGAACCCTAGC AGTGCTGGAAGCTGGAACTCTGGGAGCTCTGGACCTGGAAGTACTGGAAACCCTGGGAAGCTCTGGGACT GGAGGGACTGCAACCTGGAAACCTGGGAGCTCTGGACCTGGAAGTACTGGAAGCTGGAACTCTGGGAGCTCTGGA ACTGGAAGTACTGGAAACCAAAACCCTGGGAGCCCTAGACCTGGTAGTACCGGAACCTGGAATCCTGGCAGCTCT GAACGCGGAAGTGCTGGGCACTGGACCTCTGAGAGCTCTGTATCTGGTAGTACTGGACAATGGCACTCTGAATCT GGAAGTTTTAGGCCAGATAGCCCAGGCTCTGGGAACGCGAGGCCTAACAACCCAGACTGGGGCACATTTGAAGAG GTGTCAGGAAATGTAAGTCCAGGGACAAGGAGAGAGAGTACCACACAGAAAAACTGGTCACTTCTAAAGGAGATAAA GAGCTCAGGACTGGTAAAGAGAAGGTCACCTCTGGTAGCACAACCACCACGCGTCGTTCATGCTCTAAAACCGTT ACTAAGACTGTTATTGGTCCTGATGGTCACAAAGAAGTTACCAAAGAAGTGGTGACCTCCGAAGATGGTTCTGAC TGTCCCGAGGCAATGGATTTAGGCACATTGTCTGGCATAGGTACTCTGGATGGGTTCCGCCATAGGCACCCTGAT CAAGCTGCCTTCTTCGACACTGCCTCAACTGGAAAAACATTCCCAGGTTTCTTCTCACCTATGTTAGGAGAGTTT GTCAGTGAGACTGAGTCTAGGGGCTCAGAATCTGGCATCTTCACAAATACAAAGGAATCCAGTTCTCATCACCCT GGGATAGCTGAATTCCCTTCCCGTGGTAAATCTTCAAGTTACAGCAAACAATTTACTAGTAGCACGAGTTACAAC AGAGGAGACTCCACATTTGAAAGCAAGAGCTATAAAATGGCAGATGAGGCCGGAAGTGAAGCCGATCATGAAGGA ACACATAGCACCAAGAGAGGCCATGCTAAATCTCGCCCTGTCAGAGACTGTGATGATGTCCTCCAAACACATCCT TCAGGTACCCAAAGTGGCATTTTCAATATCAAGCTACCGGGATCCAGTAAGATTTTTTCTGTTTATTGCGATCAA GACTACAAGAGAGGTTTCGGCAGCCTGAATGACGAGGGGGGAAGGAGTTCTGGCTAGGCAATGACTACCTCCAC TTACTAACCCAAAGGGGCTCTGTTCTTAGGGTTGAATTAGAGGACTGGGCTGGGAATGAAGCTTATGCAGAATAT CACTTCCGGGTAGGCTCTGAGGCTGAAGGCTATGCCCTCCAAGTCTCCTCCTATGAAGGCACTGCGGGTGATGCT CTGATTGAGGGTTCCGTAGAGGAAGGGGCAGAGTACACCTCTCACAACAACATGCAGTTCAGCACCTTTGACAGG GATGCAGACCAGTGGGAAGAGAACTGTGCAGAAGTCTATGGGGGAGGCTGGTGGTATAATAACTGCCAAGCAGCC AATCTCAATGGAATCTACTACCCTGGGGGCTCCTATGACCCAAGGAATAACAGTCCTTATGAGATTGAGAATGGA GTGGTCTGGGTTTCCTTTAGAGGGGCAGATTATTCCCTCAGGGCTGTTCGCATGAAAATTAGGCCCCTTGTGACC CAA<u>TAG</u>GCTGAAGAAGTGGGAATGGGAGCACTCTGTCTTCTTTGCTAGAGAAGTGGAGAGAAAATACAAAAGGTA AAGCAGTTGAGATTCTCTACAACCTAAAAAATTCCTAGGTGCTATTTTCTTATCCTTTGTACTGTAGCTAAATGT CTTGAAGACTATTGGTTTGAGAACTTCTCTCCCATACCACCCAAAATCATAATGCCATTGGAAAGCAAAAAGTT GTTTTATCCATTTGATTTGAATTGTTTTAAGCCAATATTTTAAGGTAAAACTCACTGAATCTAACCATAGCTGAC CTTTGTAGTAGAATTTACAACTTATAATTACAATGCACAATTTATAATTACAATATGTATTTATGTCTTTTGCTA TGGAGCAAATCCAGGAAGGCAAGAGAAACATTCTTTCCTAAATATAAATGAAAATCTATCCTTTAAACTCTTCCA AAACTATTTATGAATATTAAAAAAAGACATAATTCACACATTAATAAACAATCTCCCAAGTATTGATTTAACTTC ATTTTCTAATAATCATAAACTATATTCTGTGACATGCTAATTATTATAAATGTAAGTCGTTAGTTCGAAAGCC TCTCACTAAGTATGATCTATGCTATATTCAAAATTCAACCCATTTACTTTGGTCAATATTTGATCTAAGTTGCAT CTTTAATCCTGGTGGTCTTGCCTTCTGATTTTTAATTTGTATCCTTTTCTATTAAGATATATTTGTCATTTTCTC

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TTGAATATGTATTAAAATATCCCAAGC

MFSMRIVCLVLSVVGTAWTADSGEGDFLAEGGGVRGPRVVERHQSACKDSDWPFCSDEDWNYKCPSGCRMKGLID EVNQDFTNRINKLKNSLFEYQKNNKDSHSLTTNIMEILRGDFSSANNRDNTYNRVSEDLRSRIEVLKRKVIEKVQ HIQLLQKNVRAQLVDMKRLEVDIDIKIRSCRGSCSRALAREVDLKDYEDQQKQLEQVIAKDLLPSRDRQHLPLIK MKPVPDLVPGNFKSQLQKVPPEWKALTDMPQMRMELERPGGNEITRGGSTSYGTGSETESPRNPSSAGSWNSGSS GPGSTGNRNPGSSGTGGTATWKPGSSGPGSTGSWNSGSSGTGSTGNQNPGSPRPGSTGTWNPGSSERGSAGHWTS ESSVSGSTGQWHSESGSFRPDSPGSGNARPNNPDWGTFEEVSGNVSPGTRREYHTEKLVTSKGDKELRTGKEKVT SGSTTTTRRSCSKTVTKTVIGPDGHKEVTKEVVTSEDGSDCPEAMDLGTLSGIGTLDGFRHRHPDEAAFFDTAST GKTFPGFFSPMLGEFVSETESRGSESGIFTNTKESSSHHPGIAEFPSRGKSSSYSKQFTSSTSYNRGDSTFESKS YKMADEAGSEADHEGTHSTKRGHAKSRPVRDCDDVLQTHPSGTQSGIFNIKLPGSSKIFSVYCDQETSLGGWLLI QQRMDGSLNFNRTWQDYKRGFGSLNDEGEGEFWLGNDYLHLLTQRGSVLRVELEDWAGNEAYAEYHFRVGSEAEG YALQVSSYEGTAGDALIEGSVEEGAEYTSHNNMQFSTFDRDADQWEENCAEVYGGGWWYNNCQAANLNGIYYPGG SYDPRNNSPYEIENGVVWVSFRGADYSLRAVRMKIRPLVTQ

GAAAGACATCAATCTGCCTGCAAAGATTCAGACTGGCCCTTCTGCTCTGATGAAGACTGGAACTACAAATGCCCT TCACTATTTGAATATCAGAAGAACAATAAGGATTCTCATTCGTTGACCACTAATATAATGGAAATTTTGAGAGGC GATTTTTCCTCAGCCAATAACCGTGATAATACCTACAACCGAGTGTCAGAGGATCTGAGAAGCAGAATTGAAGTC ATGAAACGACTGGAGGTGGACATTGATATTAAGATCCGATCTTGTCGAGGGTCATGCAGTAGGGCTTTAGCTCGT AGAGATAGGCAACACTTACCACTGATAAAAATGAAACCAGTTCCAGACTTGGTTCCCGGAAATTTTAAGAGCCAG CTTCAGAAGGTACCCCCAGAGTGGAAGGCATTAACAGACATGCCGCAGATGAGAATGGAGTTAGAGAGACCTGGT GGAAATGAGATTACTCGAGGAGGCTCCACCTCTTATGGAACCGGATCAGAGACGGAAAGCCCCAGGAACCCTAGC AGTGCTGGAAGCTGGAACTCTGGGAGCTCTGGACCTGGAAGTACTGGAAACCGAAACCCTGGGAGCTCTGGGACT GGAGGGACTGCAACCTGGAAACCTGGGAGCTCTGGACCTGGAAGTACTGGAAGCTGGAACTCTGGGAGCTCTGGA ACTGGAAGTACTGGAAACCAAAACCCTGGGAGCCCTAGACCTGGTAGTACCGGAACCTGGAATCCTGGCAGCTCT GAACGCGGAAGTGCTGGGCCACTGGACCTCTGAGAGCTCTGTATCTGGTAGTACTGGACAATGGCACTCTGAATCT GGAAGTTTTAGGCCAGATAGCCCAGGCTCTGGGAACGCGAGGCCTAACAACCCAGACTGGGGCACATTTGAAGAG GTGTCAGGAAATGTAAGTCCAGGGACAAGGAGAGAGTACCACACAGAAAAACTGGTCACTTCTAAAGGAGATAAA GAGCTCAGGACTGGTAAAGAGAAGGTCACCTCTGGTAGCACAACCACCACGCGTCGTTCATGCTCTAAAACCGTT ACTAAGACTGTTATTGGTCCTGATGGTCACAAAGAAGTTACCAAAGAAGTGGTGACCTCCGAAGATGGTTCTGAC TGTCCCGAGGCAATGGATTTAGGCACATTGTCTGGCATAGGTACTCTGGATGGGTTCCGCCATAGGCACCCTGAT GAAGCTGCCTTCTTCGACACTGCCTCAACTGGAAAAACATTCCCAGGTTTCTTCTCACCTATGTTAGGAGAGTTT GTCAGTGAGACTGAGTCTAGGGGCTCAGAATCTGGCATCTTCACAAATACAAAGGAATCCAGTTCTCATCACCCT GGGATAGCTGAATTCCCTTCCCGTGGTAAATCTTCAAGTTACAGCAAACAATTTACTAGTAGCACGAGTTACAAC AGAGGAGACTCCACATTTGAAAGCAAGAGCTATAAAATGGCAGATGAGGCCGGAAGTGAAGCCGATCATGAAGGA ACACATAGCACCAAGAGAGGCCATGCTAAATCTCGCCCTGTCAGAGGTATCCACACTTCTCCTTTGGGGAAGCCT $t TCCCTGTCCCCC{ t TAG}$ ACTAL STALLATATTTCTGCACAGTGTTCCCATGGCCCCTTGCATTTCCTTCTTAACTCT CTGTTACACGTCATTGAAACTACACTTTTTTGGTCTGTTTTTGTGCTAGACTGTAAGTTCCTTGGGGGCAGGGCC ATGAATG

MFSMRIVCLVLSVVGTAWTADSGEGDFLAEGGGVRGPRVVERHQSACKDSDWPFCSDEDWNYKCPSGCRMKGLID EVNQDFTNRINKLKNSLFEYQKNNKDSHSLTTNIMEILRGDFSSANNRDNTYNRVSEDLRSRIEVLKRKVIEKVQ HIQLLQKNVRAQLVDMKRLEVDIDIKIRSCRGSCSRALAREVDLKDYEDQQKQLEQVIAKDLLPSRDRQHLPLIK MKPVPDLVPGNFKSQLQKVPPEWKALTDMPQMRMELERPGGNEITRGGSTSYGTGSETESPRNPSSAGSWNSGSS GPGSTGNRNPGSSGTGGTATWKPGSSGPGSTGSWNSGSSGTGSTGNQNPGSPRPGSTGTWNPGSSERGSAGHWTS ESSVSGSTGQWHSESGSFRPDSPGSGNARPNNPDWGTFEEVSGNVSPGTRREYHTEKLVTSKGDKELRTGKEKVT SGSTTTTRRSCSKTVTKTVIGPDGHKEVTKEVVTSEDGSDCPEAMDLGTLSGIGTLDGFRHRHPDEAAFFDTAST GKTFPGFFSPMLGEFVSETESRGSESGIFTNTKESSSHHPGIAEFPSRGKSSSYSKQFTSSTSYNRGDSTFESKS YKMADEAGSEADHEGTHSTKRGHAKSRPVRGIHTSPLGKPSLSP

 ${\tt TGCTGACACTACAAGGCTCGGAGCTCCGGGCACTCAGACATC} \underline{{\tt ATG}} {\tt AGTTGGTCCTTGCACCCCCGGAATTTAATT}$ CTCTACTTCTATGCTCTTTATTTCTCTCTTCAACATGTGTAGCATATGTTGCTACCAGAGACAACTGCTGCATC TTAGATGAAAGATTCGGTAGTTATTGTCCAACTACCTGTGGCATTGCAGATTTCCTGTCTACTTATCAAACCAAA GTAGACAAGGATCTACAGTCTTTGGAAGACATCTTACATCAAGTTGAAAACAAAACATCAGAAGTCAAAACAGCTG ATAAAAGCAATCCAACTCACTTATAATCCTGATGAATCATCAAAACCAAATATGATAGACGCTGCTACTTTGAAG TCCAGGATAATGTTAGAAGAATTATGAAATATGAAGCATCGATTTTAACACATGACTCAAGTATTCGATATTTG CAGGAAATATATAATTCAAATAATCAAAAGATTGTTAACCTGAAAGAGAAGGTAGCCCAGCTTGAAGCACAGTGC CAGGAACCTTGCAAAGACACGGTGCAAATCCATGATATCACTGGGAAAGATTGTCAAGACATTGCCAATAAGGGA GCTAAACAGAGCGGGCTTTACTTTATTAAACCTCTGAAAGCTAACCAGCAATTCTTAGTCTACTGTGAAATCGAT GGGTCTGGAAATGGATGGACTGTGTTTCAGAAGAGACTTGATGGCAGTGTAGATTTCAAGAAAAACTGGATTCAA TATAAAGAAGGATTTGGACATCTGTCTCCTACTGGCACAACAGAATTTTGGCTGGGAAATGAGAAGATTCATTTG ATAAGCACACAGTCTGCCATCCCATATGCATTAAGAGTGGAACTGGAAGACTGGAATGGCAGAACCAGTACTGCA GACTATGCCATGTTCAAGGTGGGACCTGAAGCTGACAAGTACCGCCTAACATATGCCTACTTCGCTGGTGGGGAT GCTGGAGATGCCTTTGATGGCTTTGATTTTGGCGATGATCCTAGTGACAAGTTTTTCACATCCCATAATGGCATG ATGAACAAGTGTCACGCTGGCCATCTCAATGGAGTTTATTACCAAGGTGGCACTTACTCAAAAGCATCTACTCCT AATGGTTATGATAATGGCATTATTTGGGCCACTTGGAAAACCCGGTGGTATTCCATGAAGAAAACCACTATGAAG ATAATCCCATTCAACAGACTCACAATTGGAGAAGGACAGCAACACCCTGGGGGGGAGCCAAACAGGCTGGAGAC GTT<u>TAA</u>AAGACCGTTTCAAAAGAGATTTACTTTTTTAAAGGACTTTATCTGAACAGAGAGATATAATTTTTCC TATTGGACAATGGACTTGCAAAGCTTCACTTCATTTTAAGAGCAAAAGACCCCATGTTGAAAAACTCCATAACAGT TTTATGCTGATGATAATTTATCTACATGCATTTCAATAAACCTTTTGTTTCCTAAGACT

MSWSLHPRNLILYFYALLFLSSTCVAYVATRDNCCILDERFGSYCPTTCGIADFLSTYQTKVDKDLQSLEDILHQ VENKTSEVKQLIKAIQLTYNPDESSKPNMIDAATLKSRIMLEEIMKYEASILTHDSSIRYLQEIYNSNNQKIVNL KEKVAQLEAQCQEPCKDTVQIHDITGKDCQDIANKGAKQSGLYFIKPLKANQQFLVYCEIDGSGNGWTVFQKRLD GSVDFKKNWIQYKEGFGHLSPTGTTEFWLGNEKIHLISTQSAIPYALRVELEDWNGRTSTADYAMFKVGPEADKY RLTYAYFAGGDAGDAFDGFDFGDDPSDKFFTSHNGMQFSTWDNDNDKFEGNCAEQDGSGWWMNKCHAGHLNGVYY QGGTYSKASTPNGYDNGIIWATWKIRWYSMKKTTMKIIPFNRLTIGEGQQHHLGGAKQAGDV

 $\texttt{TGCTGACACTACAAGGCTCGGAGCTCCGGGCACTCAGACATC} \underline{\textbf{ATG}} \\ \texttt{GGTTGGTCCTTGCACCCCCGGAATTTAATT} \\ \\ \texttt{TGCTGACACTACAAGGCTCGGAGCTCCGGGCACTCAGACATC} \\ \textbf{TGCTGACACTACAAGGCTCGGAGCTCCGGGCACTCAGACATC} \\ \textbf{TGCTGACACTACAAGGCTCGGAGCTCCGGGCACTCAGACATC} \\ \textbf{TGCTGACACTACAAGGCTCGGAGCTCCGGGCACTCAGACATC} \\ \textbf{TGCTGACACTACAAGGCTCGGGCACTCAGACATC} \\ \textbf{TGCTGACACTCAGACATC} \\ \textbf{TGCTGACACTCAGACATC} \\ \textbf{TGCTGACACTCAGACATC} \\ \textbf{TGCTGACACTCAGACATC} \\ \textbf{TGCTGACACTCAGACATCAGACATC} \\ \textbf{TGCTGACACTCAGACATC} \\ \textbf{TGCTGACACTCAGACATCAGACATC} \\ \textbf{TGCTGACACTCAGACATC} \\ \textbf{TGCTGACACTCAGACATC} \\ \textbf{TGCTGACACTCAGACATC} \\ \textbf{TGCTGACACTCAGACAT$ $\verb|CTCTACTTCTATGCTCTTTATTTCTCTCTCAACATGTGTAGCATATGTTGCTACCAGAGACAACTGCTGCATC| \\$ TTAGATGAAAGATTCGGTAGTTATTGTCCAACTACCTGTGGCATTGCAGATTTCCTGTCTACTTATCAAACCAAA GTAGACAAGGATCTACAGTCTTTGGAAGACATCTTACATCAAGTTGAAAACAAAACATCAGAAGTCAAACAGCTG ATAAAAGCAATCCAACTCACTTATAATCCTGATGAATCATCAAAACCAAATATGATAGACGCTGCTACTTTGAAG TCCAGGATAATGTTAGAAGAAATTATGAAATATGAAGCATCGATTTTAACACATGACTCAAGTATTCGATATTTG CAGGAAATATATATATCAAATAATCAAAAGATTGTTAACCTGAAAGAAGGTAGCCCAGCTTGAAGCACAGTGC CAGGAACCTTGCAAAGACACGGTGCAAATCCATGATATCACTGGGAAAGATTGTCAAGACATTGCCAATAAGGGA GCTAAACAGAGCGGGCTTTACTTTATTAAACCTCTGAAAGCTAACCAGCAATTCTTAGTCTACTGTGAAATCGAT GGGTCTGGAAATGGATGGACTGTGTTTCAGAAGAGACTTGATGGCAGTGTAGATTTCAAGAAAAACTGGATTCAA TATAAAGAAGGATTTGGACATCTGTCTCCTACTGGCACAACAGAATTTTGGCTGGGAAATGAGAAGATTCATTTG ATAAGCACAGTCTGCCATCCCATATGCATTAAGAGTGGAACTGGAAGACTGGAATGGCAGAACCAGTACTGCA GACTATGCCATGTTCAAGGTGGGACCTGAAGCTGACAAGTACCGCCTAACATATGCCTACTTCGCTGGTGGGGAT GCTGGAGATGCCTTTGATGGCTTTGATTTTGGCGATGATCCTAGTGACAAGTTTTTCACATCCCATAATGGCATG ${\tt ATGAACAAGTGTCACGCTGGCCATCTCAATGGAGTTTATTACCAAGGTGGCACTTACTCAAAAGCATCTACTCCT}$ AATGGTTATGATAATGGCATTATTTGGGCCACTTGGAAAACCCGGTGGTATTCCATGAAGAAAACCACTATGAAG ATAATCCCATTCAACAGACTCACAATTGGAGAAGGACAGCAACACCACCTGGGGGGAGCCAAACAGGTCAGACCA GAGCACCCTGCGGAAACAGAATATGACTCACTTTACCCTGAGGATGATTTG<u>TAG</u>AAAATTAACTGCTAACTTCTA TTCTATTAAGGACATTTAGCCTTCAATGGAAATTAAAACTCATTTAGGACTGTATTTCCAAATTACTGATATCAG AGTTATTTAAAAATTGTTTATTTGAGGAGATAACATTTCAACTTTGTTCCTAAATATAATAATAAAATGATTG ACTTT

MSWSLHPRNLILYFYALLFLSSTCVAYVATRDNCCILDERFGSYCPTTCGIADFLSTYQTKVDKDLQSLEDILHQ VENKTSEVKQLIKAIQLTYNPDESSKPNMIDAATLKSRIMLEEIMKYEASILTHDSSIRYLQEIYNSNNQKIVNL KEKVAQLEAQCQEPCKDTVQIHDITGKDCQDIANKGAKQSGLYFIKPLKANQQFLVYCEIDGSGNGWTVFQKRLD GSVDFKKNWIQYKEGFGHLSPTGTTEFWLGNEKIHLISTQSAIPYALRVELEDWNGRTSTADYAMFKVGPEADKY RLTYAYFAGGDAGDAFDGFDFGDDPSDKFFTSHNGMQFSTWDNDNDKFEGNCAEQDGSGWWMNKCHAGHLNGVYY QGGTYSKASTPNGYDNGIIWATWKTRWYSMKKTTMKIIPFNRLTIGEGQQHHLGGAKQVRPEHPAETEYDSLYPE DDL

PCT/US2003/028547

1643/6881 FIGURE 1521

MVTNVNQNTSGALSLNQLPHTHMSKIQIPLANAYPIANADAQGCTHWLRGLPSERCARGGKLLLGTSTITVDQRI ALKEVQATWLLHKYLYHTYYYRLNIRVVCAQDTRVNTAPIPEMYSFYMCPCFRPELRGYSMDTSLIKHQCNHHCK QANRPDSVPREILAILAEELNKTKPIWTRNPDDITNEEYREFYKSLTNDWEDHLKKKNNIKLYVCRVFITDNCEE LIPEYLNFIRVLVDSEDLPLNISHKMLQQSKILKVIRKNLVKKCLELFTELAEDKENYKKFYEQFSENIKLGIHE DSQNQKKLSELLRYYTSASGDEMVSLKDYCTRIRKTRNES

GATGTGGCCCGTGGCCTAGCTCGTCAAGTTGCCGTGGCGCGGAGAACTCTGCAAAACAAGAGGCTGAGGATTGCG TTAGAGATAAACCAGTTCACGCCGGAGCCCCGTGAGGGAAGCGTCTCCGTTGGGTCCGGCCGCTCTGCGGGACTC ${\tt TGAGGAAAAGCTCGCACCAGGTGGACGCGGATCTGTCAAC} {\color{red} \underline{\textbf{ATC}}} {\tt GGTAAAGGAGACCCCAACAAGCCGCGGGGCAA}$ AATGTCCTCGTACGCCTTCTTCGTGCAGACCTGCCGGGAAGAAGAAGAAGAACACCCGGACTCTTCCGTCAA TTTCGCGGAATTCTCCAAGAAGTGTTCGGAGAGATGGAAGACCATGTCTGCAAAGGAGAAGTCGAAGTTTGAAGA TATGGCAAAAAGTGACAAAGCTCGCTATGACAGGGAGATGAAAAATTACGTTCCTCCCAAAGGTGATAAGAAGGG GAAGAAAAAGGACCCCAATGCTCCTAAAAGGCCACCATCTGCCTTCTTCCTGTTTTGCTCTGAACATCGCCCAAA GATCAAAAGTGAACACCCTGGCCTATCCATTGGGGATACTGCAAAGAAATTGGGTGAAATGTGGTCTGAGCAGTC AGCCAAAGATAAACAACCATATGAACAGAAAGCAGCTAAGCTAAAGGAGAAATATGAAAAGGATATTGCTGCATA TATCCTTTAATGATGCGTGTGGAATGTGTGTGTGTGCTCAGGCAATTATTTTGCTAAGAATGTGAATTCAAGTGC AGCTCAATACTAGCTTCAGTATAAAAACTGTACAGATTTTTGTATAGCTGATAAGATTCTCTGTAGAGAAAATAC TTTTAAAAAATGCAGGTTGTAGCTTTTTGATGGGCTACTCATACAGTTAGATTTTACAGCTTCTGATGTTGAATG TTCCTAAATATTTAATGGTTTTTTTAATTTCTGTGTGTATGGTAGCACAGCAAACTTGTAGGAATTAGTATCAAT

MGKGDPNKPRGKMSSYAFFVQTCREEHKKKHPDSSVNFAEFSKKCSERWKTMSAKEKSKFEDMAKSDKARYDREM KNYVPPKGDKKGKKKDPNAPKRPPSAFFLFCSEHRPKIKSEHPGLSIGDTAKKLGEMWSEQSAKDKQPYEQKAAK LKEKYEKDIAAYRAKGKSEAGKKGPGRPTGSKKKNEPEDEEEEEEEEDEDEEE

CCACCCGAGATGTCGCCCCCGACTACAGCATGGCCCTGTCCTACAGCCCCGAGTATGCCAGCGGCGCCGCCGG GCGCCGAGGCACCGCCAACCGCAAGGAGCGCGCGCAGGACTCAGAGCATCAACAGCGCCTTCGCCGAACTGCGCGA GTGCATCCCCAACGTACCCGCCGACACCCAAACTCTCCAAAATCAAGACCCTGCGCCTGGCCACCAGCTACATCGC CGACGTGAAAGAGGAGAAGAAGGAGGAGCTGAACGAAATCTTGAAAAGCACAGTGAGCAGCAACGACAAGAA AACCAAAGGCCGGACGGCTGGCCGCAGCACGTCTGGGCCCTGGAGCTCAAGCAGTGAGGAGGAGGAGAAGGAGG TTTGAGGCATCTGCTCCCCGTCTCCCCAAAAAAAAAAGTGGATATTTGAAGAAAAGCATTCCATATTTTAAT ACGAAGAGGACACTCCCGTGTGCAGGCCGAATCAGACCCGGCGTGGGCGAATTCAGAAGTGCCCAGGGAGAGACA GTGGAAGAAGGAGCCTACCAAAGTGTTGGAGTAAAC

GGAGGCAAACAACCCATCTCTTGGAGAATCCACACTTCGTTTCTTCTAGGTCCAGCCTAAATGTTACCTCCTC GTTTCTTGACAACCTAATCAATGCATTGAACAAAGGAGATGTTTAGACAACCCATATAAAATGAATAAGAGAAAT AGGGTGAATACCGTCTACCCCAATTGCAATCAGATTAGTTTCCTTTATTTTGAAAACGATTAGAACTAGTAGAGG $\tt CTGCATCAACTTGCGCTGGCTCAGAGGGAGGCTCAGCCCCAGCCTGGCCTTCCTGGTGCCCACTCCCAACATCCT$ GAGCAGGGCCGACTCTAGGCACCCCACGATTAGCTGAGTGATCTAGGGCAAGGACCTAGGCGTCTCTAAGTCTTA GTTTCCCCATCTGAACA<u>ATG</u>TGGATAATGACACGTACCTGGGGTGGGCAGGCTAGAGTAAATGGGAAAATCAAAG $\tt CGCCAGCCAGAGCGGGTCGCACTGTTAGTTCCTGTATTTTCTCCTCCTGCCTCTGGTTTCTTCCGTTCCGTTCTA$ GCTGCCTGAAGACCCAGCCCGACAGCGATGCCTGTCAGCCCGCGTCGCCCACCAGGGCAGCTGCTCTCCCAACTC GCATGGGGGCACCACCCCGCCTCGGTGCCCTAGAGCTGAGCGCAGCCGCGGCTCCACGGGGATCGCCAGGGCCT $\tt CCCCAGCCCTCTTCTCGGTTCCCCACACCCAGGAGGCCGGTTCTCCGCCGCTCAGGCTGGGAGAGGTCACCGCTC$ CTCACCGCTATTTTCAACATTTCCTCAATCAAGTGCCTTTAAATAGAGCTGCACAAACAGATTGGCGGCAAAAGC GTAGATCTTGTCACGATTGAGACCAATCCAGTATTTCAGCCTTGTTTGCTTTGCAATTACGGGTTGGCTTGTGGC ${\tt CCAGGGCCGCGGGCACGCAGAGCTGTGTTGAAGGACATACTTTTCAGGTTCCTGACAGTCACTGAGCTATACGCA}$ ATAATAAAGTGCGTGATTCGCGTGTGGAAACCAGTGTCGTGTCCTTACCGGCTTCCTTTTCTGTCCACCTTCCCT CTCTCTTCTACCTCCGTCTCGCTTTTCTTCAGTGCATGTTAGCGGTTTGCTGGATTTCCCTTCTCCCTCGCTGTT CAACTGCTAGCATGATTTGTTACATTTTCCACAGCTGTTTATTCTTGTTTGACTTTTTGTACAAAGTCACTTTAA TTTAATTCTTTGGAGATGGCTCTTCTGTGTAAATCAGCTGCTGGGTGCGTTCGGTCACCTCGTAGGCCAGCCTAG TITGTATCAGCAGAACAGTAGTGGACTCGACTCAGGTCGTAAGCCTTATATTTCACAGACAATTAAATCTTGGCT GCTGTTGAACAAAACTGTAATATTTACTTTGTTCTATACCGAGAAGCACTTTTAAAGT

 ${\tt MWIMTRTWGGQARVNGKIKAPARAGRTVSSCIFSSCLWFLPFRSSCLKTQPDSDACQPASPTRAAALPTRMGGTTPRCPRAERSRGSTGIARASALAAGGAGVLRGRDQSAIRAATPDLGRQLSSHCDGHWGAPSILVKFSL}$

GAAGGAGGAGGTGGCAAATCACTTATAAATGGTGCTGAAGCAGGACCCGAAGCCTAAATTCCAGGAGGGTGAGCG ${\tt AGTGCTGTGGTTTCATGGGCCTCTGCTTTATGATGCAAAGTGTGTAAAGGTTGCCATAAAGGACAAAAAGTGAAA}$ TACTTTATACATTACAGTGGTTGGAATAAAAATTGGGATGAGTGGGTTCCGGAGAGCAGAGTACTCAAATATGTG GACACCAATTTGCAGAAACAGCGAGAACTTCAAAAAGCCAATCAGGAGCAGTATGCAGAGGGGAAG<u>ATG</u>AGATGG CCTACTGTTGAAAATGAGGAAACATTCATGAACAGAGTTGAAGTTAAAGTAAAGATTCCTGAAGAGCTAAAACCA TGGCTTGTTGATGACTGGGACTTAATTACCAGGCAAAAACAGCTCTTCTATCTTCCTGCCGAGAAGAATGTGGAT TCCATTCTTGAGGACTATGCAAATTACAAGAAATCTCATGGAAACACAGATAATAAGGAGTATGCAGTTAATGAA GTTGTGGCAGGGATAAAAGAATACTTCAACCTAATGTTGGGCACCCAGCTACTCAACAAATTTGAGAGACCACAG TATGCCGAAATTCTTGCAGATTGTCCCGATGCACCCATGTCCCAGGTGTATGGAGTGCCACATCTCCTGAGATTA TCTGTACAAATTGGAGCAATGTTGGCCTATACACCTCTGAATGAGAAGAGCCTTGCTTTATTACTCAATTATCTT ${\tt CACGATTTCCTAAAGTACCTGGCAAAGAATTCTGCAACTTTGTTTAGTGCCAGCGATTATGAAGTGGCTCTTCCT}$ ${\tt GAGTACCATCGGAAAGCTGTG} \underline{{\tt TGA}} {\tt GAGGCACTCTCACTCACTTATGTCTGGATCTCCATAAACACATTTTTGTTC}$ TTAGTCTATCTCTTGTACAAACGATGTGCTTTGAAGATGTTAGTGTATAACAATTGATGTTTTGTTTTCTGTTTGA ${\tt CCAGTGTTTCAATGATGGACAACACAGGGATATGCTGTAGAGTGTTTTATTGCCTAGTTGACAAAGCTGCTTTT}$ GAATGCTGGTGGTTCTATTCCTTTAACACTATGCATTTTTATAATACGTGTTAATGCTACATGACAAAATGCTCT ATTGTTGAAGAATGGCTTGTTTCACAGTTTTTGTATTTGTGTCTAATGCACGTTTTAACATGATAGATGCAATGC ATTGTGTAGCTACTTTTCTGGAAAAGTCAATCTTTTAGGAATTGTTTTTCAGATCTTCATTAAATTTTTTCCTTA AATTTC

 $\label{thm:cond} \begin{minipage} MRWAAPGKKTSGLQQKNIEVKTKKNKQKTPGNGDGGSTSETPQPPRKKRAQVDPTVENEETFMNRVEVKVKIPEE\\ LKPWLVDDWDLITRQKQLFYLPAEKNVDSILEDYANYKKSHGNTDNKEYAVNEVVAGIKEYFNLMLGTQLLNKFE\\ RPQYAEILADCPDAPMSQVYGVPHLLRLSVQIGAMLAYTPLNEKSLALLLNYLHDFLKYLAKNSATLFSASDYEV\\ ALPEYHRKAV\\ \end{minipage}$

FIGURE 1530A

GAGGGCCCGGCAGGCCCGGTCCCTGCTCGGGGGCGCGCTGAGACGGCGGTGAGCTCCACGAGAGCGCCGTCGC CACTTCGGGCCAACTTTGCGATTCCCGACAGTTAAGCAATGGGGAGACATTTGGCTTTGCTCCTGCTTCTGCTCC TTCTCTTCCAACATTTTGGAGACAGTGATGGCAGCCAACGACTTGAACAGACTCCTCTGCAGTTTACACACCTCG AGTACAACGTCACCGTGCAGGAGAACTCTGCAGCTAAGACTTATGTGGGGCATCCTGTCAAGATGGGTGTTTACA TTACACATCCAGCGTGGGAAGTAAGGTACAAAATTGTTTCCGGAGACAGTGAAAACCTGTTCAAAGCTGAAGAGT ACATTCTCGGAGACTTTTGCTTTCTAAGAATAAGGACCAAAGGAGGAAATACAGCTATTCTTAATAGAGAAGTGA AGGATCACTACACATTGATAGTGAAAGCACTTGAAAAAAATACTAATGTGGAGGCGCGAACAAAGGTCAGGGTGC CTATAAGGACCAGTATCGCAAGAGTCAGCGCCACGGATGCAGACATAGGAACCAACGGGGAATTTTACTACAGTT TTAAAGATCGAACAGATATGTTTGCTATTCACCCAACCAGTGGTGTGATAGTGTTAACTGGTAGACTTGATTACC TAGAGACCAAGCTCTATGAGATGGAAATCCTCGCTGCGGACCGTGGCATGAAGTTGTATGGGAGCAGTGGCATCA CACCATCAGAACTGGACAGGGACCCAGCATATGCAATTGTGACAGTGGATGACTGCGATCAGGGTGCCAATGGTG ACATAGCATCTTAAGCATCGTGGCAGGTGACCTTCTCCAGCAGTTTAGAACAGTGAGGTCCTTTCCAGGGAGTA AGGAGTATAAAGTCAAAGCCATCGGTGGCATTGATTGGGACAGTCATCCTTTCGGCTACAATCTCACACTACAGG CTAAAGATAAAGGAACTCCGCCCCAGTTCTCTTCTGTTAAAGTCATTCACGTGACTTCTCCACAGTTCAAAGCCG GGCCAGTCAAGTTTGAAAAGGATGTTTACAGAGCAGAAATAAGTGAATTTGCTCCTCCCAACACACCTGTGGTCA TGGTAAAGGCCATTCCTGCTTATTCCCATTTGAGGTATGTTTTTAAAAGTACACCTGGAAAAGCTAAATTCAGTT TAACAACAAGTGACAGAAAAGCGTCCACCAAGGTCTTGGTGAAAGTCTTAGGTGCAAATAGCAATCCCCCTGAAT TTACCCAGACAGCGTACAAAGCTGCTTTTGATGAGAACGTGCCCATTGGTACTACTGTCATGAGCCTGAGTGCCG TAGACCCTGATGAGGGTGAGAACGGGTACGTGACATACAGTATCGCAAATTTAAATCATGTGCCGTTTGCGATTG ACCATTTCACTGGTGCCGTGAGTACGTCAGAAAACCTGGACTACGAACTGATGCCTCGGGTTTATACTCTGAGGA TTCGTGCATCAGACTGGGGCTTGCCGTACCGCCGGGAAGTCGAAGTCCTTGCTACAATTACTCTCAATAACTTGA ATGACAACACCTTTGTTTGAGAAAATAAATTGTGAAGGGACAATTCCCAGAGATCTAGGCGTGGGAGAGCAAA TAACCACTGTTTCTGCTATTGATGCAGATGAACTTCAGTTGGTACAGTATCAGATTGAAGCTGGAAATGAACTGG TGTCTTTCCACAGTCTGAGAATCACAGCTACAGATGGAGAAAATTTTGCCACACCATTATATATCAACATAACAG TGGCTGCCAGTCACAAGCTGGTAAACTTGCAGTGTGAAGAGACTGGTGTTGCCAAAATGCTGGCAGAGAAGCTCC TGCAGGCAAATAAATTACACAACCAGGGAGAGGTGGAGGATATTTTCTTCGATTCTCACTCTGTCAATGCTCACA TACCGCAGTTTAGAAGCACTCTTCCGACTGGTATTCAGGTAAAGGAAAACCAGCCTGTGGGTTCCAGTGTAATTT TCATGAACTCCACTGACCTTGACACTGGCTTCAATGGAAAACTGGTCTATGCTGTTTCTGGAGGAAATGAGGATA GTTGCTTCATGATTGATATGGAAACAGGAATGCTGAAAATTTTATCTCCTCTTGACCGTGAAACAACAGACAAAT ACACCCTGAATATTACCGTCTATGACCTTGGGATACCCCAGAAGGCTGCGTGGCGTCTTCTACATGTCGTGGTTG TCGATGCCAATGATAATCCACCCGAGTTTTTACAGGAGAGCTATTTTGTGGAAGTGAAGTGAAGACAAGGAGGTAC ATAGTGAAATCATCCAGGTTGAAGCCACAGATAAAGACCTGGGGCCCAACGGACACGTGACGTACTCAATTGTTA CAGACACAGACACATTTTCAATTGACAGCGTGACGGGTGTTGTTAACATCGCACGCCCTCTGGATCGAGAGCTGC AGCATGAGCACTCCTTAAAGATTGAGGCCAGGGACCAAGCCAGAGAAGAGCCTCAGCTGTTCTCCACTGTCGTTG TGAAAGTATCACTAGAAGATGTTAATGACAACCCACCTACATTTATTCCACCTAATTATCGTGTGAAAGTCCGAG AGGATCTTCCAGAAGGAACCGTCATCATGTGGTTAGAAGCCCACGATCCTGATTTAGGTCAGTCTGGTCAGGTGA GATACAGCCTTCTGGACCACGGAGAAGGAAACTTCGATGTGGATAAACTCAGTGGAGCAGTTAGGATCGTCCAGC AGTTGGACTTTGAGAAGAAGCAAGTGTATAATCTCACTGTGAGGGCCAAAGACAAGGGAAAGCCAGTTTCTCTGT TGGAAAAGGGGACAGTGAAAGAAGATGCACCTGTTGGTTCATTGGTAATGACGGTGTCGGCTCATGATGAGGACG CCAGAAGAGATGGGGAGATCCGATACTCCATTAGAGATGGCTCTGGCGTTGGTGTTTTCAAAATAGGTGAAGAGA CAGGTGTCATAGAGACGTCAGATCGACTGGACCGTGAATCGACCTCCCATTATTGGCTAACAGTCTTTGCAACCG ATCAGGGTGTCGTGCCTCTTTCATCGTTCATAGAGATCTACATAGAGGTTGAGGATGTCAATGACAATGCACCAC

1653/6881 FIGURE 1530B

AGACATCAGAGCCTGTTTATTACCCAGAAATCATGGAAAATTCTCCTAAAGATGTATCTGTGGTCCAGATCGAGG CATTTGATCCAGATTCGAGCTCTAATGACAAGCTCATGTACAAAATTACAAGTGGAAATCCACAAGGATTCTTTT CAATACATCCTAAAACAGGTCTCATCACAACTACGTCAAGGAAGCTAGACCGAGAACAGCAAGATGAACACATAT TAGAGGTTACTGTGACAGACAATGGTAGTCCCCCCAAATCAACCATTGCAAGAGTCATTGTGAAAATCCTTGATG AAAATGACAACAAACCTCAGTTTCTGCAAAAGTTCTACAAAATCAGACTCCCTGAGCGGGAAAAGCCAGACCGAG AAAGAAATGCCAGACGGGAGCCGCTCTATCACGTCATAGCCACCGACAAGGATGAGGGCCCCAATGCAGAAATCT CCTACAGCATCGAAGACGGGAATGAGCATGGCAAATTTTTCATCGAACCGAAAACTGGAGTGGTTTCGTCCAAGA GGTTTTCAGCAGCTGGAGAATATGATATTCTTTCAATTAAGGCAGTTGACAATGGTCGCCCTCAAAAGTCATCAA CCACCAGACTCCATATTGAATGGATCTCCAAGCCCAAACCGTCCCTGGAGCCCATTTCATTTGAAGAATCATTTT TTACCTTTACTGTGATGGAAAGTGACCCCGTTGCTCACATGATTGGAGTAATATCTGTGGAGCCTCCTGGCATAC CCCTTTGGTTTGACATCACTGGTGGCAACTACGACAGTCACTTCGATGTGGACAAGGGAACTGGAACCATCATTG TTGCCAAACCTCTTGATGCAGAACAGAAGTCAAACTACAACCTCACAGTCGAGGCTACAGATGGAACCACCACTA TCCTCACTCAGGTATTCATCAAAGTAATAGACACAAATGACCATCGTCCTCAGTTTTCTACATCAAAGTATGAAG TTGTTATTCCTGAAGATACAGCGCCAGAAACAGAAATTTTGCAAATCAGTGCTGTGGATCAGGATGAGAAAAACA AACTAATCTACACTCTGCAGAGCAGTAGAGATCCACTGAGTCTCAAGAAATTTCGTCTTGATCCTGCAACCGGCT CTCTCTATACTTCTGAGAAACTGGATCATGAAGCTGTTCACCAGCACACCCTCACGGTCATGGTACGAGATCAAG ATGTGCCTGTAAAACGCAACTTTGCAAGGATTGTGGTCAATGTCAGCGACACGAATGACCACGCCCCGTGGTTCA CCGCTTCCTCCTACAAAGGGCGGGTTTATGAATCGGCAGCCGTTGGCTCAGTTGTGTTGCAGGTGACGGCTCTGG TTATGATTGATCCTGTCTTGGGCTCTATTAAAACTGCCAAAGAATTAGATCGAAGTAACCAAGCGGAGTATGATT TAATGGTAAAAGCTACAGATAAGGGCAGTCCACCAATGAGTGAAATAACTTCTGTGCGTATCTTTGTCACAATTG CTGACAACGCCTCTCCGAAGTTTACATCAAAAGAATATTCTGTTGAACTTAGTGAAACTGTCAGCATTGGGAGTT TCGTTGGGATGGTTACAGCCCATAGTCAATCATCAGTGGTGTATGAAATAAAAGATGGAAATACAGGTGATGCTT TTGATATTAATCCACATTCTGGAACTATCATCACTCAGAAAGCCCTGGACTTTGAAACTTTGCCCATTTACACAT TGATAATACAAGGAACTAACATGGCTGGTTTGTCCACTAATACAACGGTTCTAGTTCACTTGCAGGATGAGAATG ACAACGCCCCAGTTTTTATGCAGGCAGAATATACAGGACTCATTAGTGAATCAGCCTCAATTAACAGCGTGGTCC TAACAGACAGGAATGTCCCACTGGTGATTCGAGCAGCTGATGCTGATAAAGACTCAAATGCTTTGCTTGTATATC ACATTGTTGAACCATCTGTACACACATATTTTGCTATTGATTCTAGCACTGGTGCTATTCATACAGTACTAAGTC TGGACTATGAAGAAACAAGTATTTTTCACTTTACCGTCCAAGTGCATGACATGGGAACCCCACGTTTATTTGCTG AGTATGCAGCGAATGTAACAGTACATGTAATTGACATTAATGACTGCCCCCTGTGTTTTGCCAAGCCATTATATG AAGCATCTCTTTTGTTACCAACATACAAAGGAGTAAAAGTCATCACAGTAAATGCTACAGATGCTGATTCAAGTG CATTCTCACAGTTGATTTACTCCATCACCGAAGGCAACATCGGGGAGAAGTTTTCTATGGACTACAAGACTGGTG CTCTCACTGTCCAAAACACAACTCAGTTAAGAAGCCGCTACGAGCTAACCGTTAGAGCTTCCGATGGCAGATTTG AGCCTTTGTTTTATCACATCCTCAACCCAGATCGCAGATTTAAAATAAGCCGCACTTCAGGAGTTCTGTCAACCA CTGGCACGCCCTTCGATCGTGAGCAGCAGGAGGCGTTTGATGTGGTTGTAGAAGTGACAGAGGAACATAAGCCTT CTGCAGTGGCCCACGTTGTCGTGAAGGTCATTGTAGAAGACCAAAATGATAATGCGCCGGTGTTTGTCAACCTTC CCTACTACGCCGTTGTTAAAGTGGACACTGAGGTGGGCCATGTCATTCGCTATGTCACTGCTGTAGACAGAGACA GTGGCAGAAACGGGGAAGTGCATTACTACCTCAAGGAACATCATGAACACTTTCAAATTGGACCCTTGGGTGAAA GGAACCCGGCCTTTTCAGCGGAAGTTATCGTTCCGATCACTGTCATGAATAAAGCCATGCCTGTGTTTGAAAAAAC CTTTCTACAGTGCAGAGATTGCAGAGAGCATCCAGGTGCACAGCCCTGTGGTCCACGTGCAGGCTAACAGCCCGG AAGGCCTGAAAGTGTTCTACAGCATCACAGACGGAGACCCTTTCAGCCAGTTCACTATTAACTTCAATACTGGAG TTATCAATGTCATAGCTCCTCTGGACTTTGAGGCCCACCCGGCATATAAGCTGAGCATACGCGCAACTGACTCCT TGACGGCCCTCATGCTGAAGTATTTGTGGACATCATAGTAGACGACATCAATGATAACCCTCCTGTGTTTGCTC AGCAGTCTTATGCGGTGACCCTGTCTGAGGCATCTGTAATTGGAACGTCTGTTGTTCAAGTTAGAGCCACCGATT CTGATTCAGAACCAAATAGAGGAATCTCATACCAGATGTTTGGGAATCACAGCAAGAGTCATGATCATTTTCATG

FIGURE 1530C

TAGACAGCAGCACTGGCCTCATCTCACTACTCAGAACCCTGGATTACGAGCAGTCCCGGCAGCACACGATTTTTG TGAGGGCAGTTGATGGTGGTATGCCCACGCTGAGCAGTGATGTGATTGTCACGGTGGACGTTACCGACCTCAATG ATAATCCACCACTCTTTGAACAACAGATTTATGAAGCCAGAATTAGCGAGCACGCCCCTCATGGGCATTTCGTGA ATAAACATTTTGTCATTGACAGTGCAACAGGGATTATCACCCTCTCAAACCTGCACCGGCACGCCCTGAAGCCAT TTTACAGTCTTAACCTGTCAGTGTCTGATGGAGTTTTTAGAAGTTCCACCCAGGTTCATGTAACTGTAATTGGAG GCAATTTGCACAGTCCTGCTTTCCTTCAGAACGAATATGAAGTGGAACTAGCTGAAAACGCTCCCCTACATACCC TTGCCAAAGACAGATTTTACATAAATGAGAGAGGACAGATATTTACTTTGGAAAAACTTGATCGAGAAACCCCGG CGGAGAAAGTGATCTCAGTCCGTTTAATGGCTAAGGATGCTGGAGGAAAAGTTGCTTTCTGCACCGTGAATGTCA TCCTTACAGATGACAATGCACCACAATTTCGAGCAACCAAATACGAAGTGAATATCGGGTCCAGTGCTG CTAAAGGGACTTCAGTCGTTAAAGTTCTTGCAAGTGATGCCGATGAGGGCTCCAATGCCGACATCACCTATGCCA TTGAAGCAGACTCTGAAAGTGTAAAAGAGAATTTGGAAATTAACAAACTGTCCGGCGTAATCACTACAAAGGAGA GCCTCATTGGCTTGGAAAATGAATTCTTCACTTTCTTTGTTAGAGCTGTGGATAATGGGTCTCCATCAAAAGAAT CTGTTGTTCTTGTCTATGTTAAAATCCTTCCACCGGAAATGCAGCTTCCAAAATTTTCAGAACCTTTCTATACCT TGAAGTTGGAGAAGAGTCTTGATCATGAGACAACTAAGTGGTATCAGTTTTCCATACTGGCCAGGTGCACTCAAG ATGACCATGAGATGGTGGCTTCTGTAGATGTTAGTATCCAAGTGAAAGATGCAAATGACAACAGCCCGGTCTTTG AATCTAGTCCATATGAGGCATTCATTGTTGAAAACCTGCCAGGGGGAAGTAGAGTAATTCAGATCAGGGCATCTG ATGCTGACTCAGGAACCAACGGCCAAGTTATGTATAGCCTGGATCAGTCACAAAGTGTGGAAGTCATTGAATCCT TTGCCATTAACATGGAAACAGGCTGGATTACAACTTTAAAGGAACTTGACCATGAAAAGAGAGACACTTACCAGA TTAAAGTGGTTGCATCAGATCATGGTGAAAAGATCCAGCTATCCTCCACAGCCATTGTGGATGTTACCGTCACCG GGGTGATTGCCATCTTAAGTACCACGGATGCTGATTCTGAAGAGATCAACAGACAAGTTACATATTTCATAACAG ACAGGGAAAAAAGGGACAATTACCTTCTTACTATCACGGCAACTGATGGCACCTTCTCATCAAAAGCGATAGTTG AAGTGAAAGTTCTGGATGCAAATGACAACAGTCCAGTTTGTGAAAAGACTTTATATTCAGACACTATTCCTGAAG ACGTCCTTCCTGGAAAATTGATCATGCAGATCTCTGCTACAGACGCAGACATCCGCTCTAACGCTGAAATTACTT ACACGTTATTGGGTTCAGGTGCAGAAAAATTCAAACTAAATCCAGACACAGGTGAACTGAAAACGTCAACCCCCC TTGATCGTGAGGAGCAAGCTGTTTATCATCTTCTCGTCAGGGCCACAGATGGAGGAGGAAGATTCTGCCAAGCCA GTATTGTGCTCACGCTAGAAGATGTGAACGATAACGCCCCCGAATTCTCTGCCGATCCTTATGCCATCACCGTGT TTGAAAACACAGAGCCGGGAACGCTGCTGACAAGAGTGCAGGCCACAGATGCCGACGCAGGATTAAATCGGAAGA TTTTATACTCACTGATTGACTCTGCTGATGGGCAGTTCTCCATTAACGAATTATCTGGAATTATTCAGTTAGAAA AACCTTTGGACAGAGAACTCCAGGCAGTATACACCCTCTCTTTGAAAGCTGTGGATCAAGGCTTGCCAAGGAGGC TGACTGCCACTGGCACTGTGATTGTATCAGTTCTTGACATAAATGACAACCCCCCTGTGTTTGAGTACCGTGAAT ATGGTGCCACCGTGTCTGAGGACATTCTTGTTGGAACTGAAGTTCTTCAAGTGTATGCAGCAAGTCGGGATATTG AAGCAAATGCAGAAATCACCTACTCAATAATAAGTGGAAATGAACATGGGAAATTCAGCATAGATTCTAAAACAG GGGCCGTATTTATCATTGAGAATCTGGATTATGAGAGCTCTCATGAGTATTACCTAACAGTAGAGGCCACTGATG GAGGCACGCCTTCACTGAGCGACGTTGCCACTGTGAACGTTAATGTAACAGATATCAACGATAATACCCCTGTGT TCAGCCAAGACACCTACACGACAGTCATCAGTGAAGATGCCGTTCTTGAGCAGTCTGTCATCACGGTTATGGCCG ATGATGCCGATGGACCTTCCAACAGCCACATCCACTACTCAATTATAGATGGCAACCAAGGAAGCTCGTTCACAA $\tt TTGACCCCGTCAGGGGAGAAGTCAAAGTGACCAAACTTCTCGACCGAGAAACGATTTCAGGTTACACGCTCACGG$ TTCAAGCTTCTGATAATGGCAGTCCACCCAGAGTCAACACGACGACCGTGAACATCGATGTGTCCGATGTCAATG ACAACGCCCCGTCTTCTCCAGGGGAAACTACAGTGTCATTATCCAGGAAAATAAGCCAGTGGGCTTCAGCGTGC TGCAGCTGGTAGTAACAGATGAGGATTCTTCCCATAACGGTCCACCCTTCTTCTTTACTATTGTAACTGGAAATG

FIGURE 1530D

TAATTGAGGAGAGCATCTATCCGCCTGCGATTTTGCCCCTGGAGATTTTCATCACCTCTTCTGGAGAAGAATACT CAGGTGGCGTCATTGGGAAGATCCATGCCACAGACCAGGACGTGTATGATACTCTAACCTACAGTCTCGACCCTC AGATGGACAACCTGTTCTCTGTTTCCAGCACAGGGGGCCAAGCTGATAGCCACAAAAAGCTAGACATAGGGCAAT ACCTTCTCAATGTCAGCGTAACAGATGGGAAGTTCACGACGGTGGCCGACATCACAGTGCATATCAGACAAGTCA CACAGGAGATGTTGAACCACCACCATCGCGATCCGCTTTGCCAACCTCACTCCGGAAGAATTCGTTGGTGACTACT GGCGCAACTTCCAGCGAGCTTTACGGAACATCCTGGGTGTGAGGAGGAACGACATACAGATTGTTAGTTTGCAGT CCTCTGAACCTCACCCACATCTGGACGTCTTACTTTTTGTAGAGAAACCAGGTAGTGCTCAGATCTCAACAAAAC AACTTCTGCACAAGATTAACTCTTCCGTGACTGACATTGAGGAAATCATTGGAGTTAGGATACTGAATGTATTCC CAACACACAGCCAGACTGAGTTTTGTGACTCCCCGCCACCAGGGCAGCGGTGTGTCTCTGCAAAGAGG GAAGGTGCCCACCTGTCCACCATGGCTGTGAAGATGATCCGTGCCCTGAGGGATCCGAATGTGTGTCTGATCCCT GGGAGGAGAACACCCTGTGTCTGTCCCAGCGGCAGGTTTGGTCAGTGCCCAGGGAGTTCATCTATGACACTGA CTGGAAACAGCTACGTGAAATACCGTCTGACGGAAAATGAAAACAAATTAGAGATGAAACTGACCATGAGGCTCA GAACATATTCCACGCATGCGGTTGTCATGTATGCTCGAGGAACTGACTATAGCATCTTGGAGATTCATCATGGAA GGCTGCAGTACAAGTTTGACTGTGGAAGTGGCCCTGGAATTGTCTCTGTTCAGAGCATTCAGGTCAATGATGGGC AGTGGCACGCAGTGGCCCTGGAAGTGAATGGAAACTATGCTCGCTTGGTTCTAGACCAAGTTCATACTGCATCGG GCACAGCCCCAGGGACTCTGAAAACCCTGAACCTGGATAACTATGTGTTTTTTGGTGGCCACATCCGTCAGCAGG AGGAGCTCCCTTTAAACAGCAAACCCAGAAGCTATGCACACATCGAAGAGTCGGTGGATGTATCTCCAGGCTGCT TCCTGACGGCCACGGAAGACTGCGCCAGCAACCCTTGCCAGAATGGAGGCGTTTGCAATCCGTCACCTGCTGGAG GTTATTACTGCAAATGCAGTGCCTTGTACATAGGGACCCACTGTGAGATAAGCGTCAATCCGTGTTCCTCCAAGC AGAGGTGTCAGCTTAGTCCATACTGCAAAGATGAACCCTGTAAGAATGGCGGAACATGCTTTGACAGTTTGGATG GCGCCGTTTGTCAGTGTGATTCGGGTTTTAGGGGAGAAAGGTGTCAGAGTGATATCGACGAGTGCTCTGGAAACC ${\tt AGAAGCATCAGGCTGAACCTAAAGACAAGCACCTGGGACCCGCTACGGCTTTCTTGCAAAGACCGTATTTTGATT}$ CCAAGCTAAATAAGAACATTTACTCAGACATACCACCCCAGGTGCCTGTCCGGCCTATTTCCTACACCCCGAGTA TTCCAAGTGACTCAAGAAACAATCTGGACCGAAATTCCTTCGAAGGATCTGCTATCCCAGAGCATCCCGAATTCA GCACTTTTAACCCCGAGTCTGTGCACGGGCACCGAAAAGCAGTGGCGGTCTGCAGCGTGGCGCCAAACCTGCCTC AAGTGGTGGATCTTGATCCCTGTCTTTCCAAGAAGCCTCTAGAGGAAAAGCCTTCCCAGCCATACAGTGCCCGGG AAAGCCTGTCTGAAGTGCAGTCTCTGAGCTCCTTCCAGTCCGAATCGTGCGATGACAATGGGTATCACTGGGATA CACCCCTGTACTCAGCAGATCCAAACGCCATCGATACGGACTATTACCCTGGAGGCTACGACATCGAAAGTGATT TTCCTCCACCCCAGAAGACTTCCCCGCAGCTGATGAGCTACCACCGTTACCGCCCGAATTCAGCAATCAGTTTG AATCCATCCACCCTCCTAGAGACATGCCTGCCGCGGTAGCTTGGGTTCTTCATCAAGAAACCGGCAGAGGTTCA GTACTTGTAGAGAACCCCATGCCCCTTACCCGCCAGGGTATCAAAGACACTTCGAGGCGCCCGCTGTCGAGAGCA TGCCCATGTCTGTGTACGCCTCCACCGCCTCCTGCTCTGACGTGTCAGCCTGCTGCGAAGTGGAGTCCGAGGTCA TGATGAGTGACTATGAGAGGGGGACGACGGCCACTTCGAAGAGGTGACGATCCCGCCCTGGATTCCCAGCAGC ACACGGAAGTCTGACTCTCAACTCCCCCAAAGTGCCTGACTTTAGTGAACCTAGAGGTGATGTGAGTAATCCGC GCTGTTCTTTGCAGCAGTGCTTCCAAGCTTTTTTTGGTGAGCCGAATGGGCATGGCTGCGCTGGATCCTGCGCCT CTGGACGTGCTAGCCATTTCCAGTGTCCCAACTACTGTCATCGTGAGGTTTTCATCGGCTGTGCCATTTCCCAAC GTCTTTTGGGATTTACATCTGTCTGTGTTAAAATAATCAAACGAAAAATCAGTCCTGTGTTGTCAGCATGATTCA TCATAGTTTTAACTAGATTTCCAAGATATTTTGTGCATTTGTTTCAACTGAATTTTGGTGGTGTCAGTGCCATTA

1656/6881 FIGURE 1530E

TCTAGCACCCTGATTTTTTTTTTTTTTACTATAACCAGGGTTTCATTCTGTCTTTTTCCACTGAAGTGTGACATTT
TGTTAGTACATTTCAGTGTAGTCATTCATTTCTAGCTGTACATAGGATGAAGGAGAGATCAGATACATGAACATG
TCTTACATGGGTTGCTGTATTTAGAATTATAAACATTTTTCATTATTGGAAAGTGTAACGGGGACCTTCTGCATA
CCTGTTTAGAACCAAAACCACCATGACACAGTTTTTATAGTGTCTGTATATTTGTGATGCAATGGTCTTGTAAAG
GTTTTTAATGAAAACTACCATTAGCCAGTCTTTCTTACTGACAATAAATTATTAAAAAT

CTCCCCTGCCTCCGTGGCTTTTTGCCCCTGAAGCCACAGCTTTTTGCCCTCGCCGCCGCGGCTTTTTTGCGACCT TTTCCCCCCTGCTGCCGCAGCTTTTTGCCCCCACCACCGCGAATTTTTCTGCCGCGGGCTTTTTGTCACCGCCGCC GTGGCTTTTTATGGCTTTTTGGCCCCCGGTTTTTCCCGCCGCGGCTTCCTGCCCCGCAGCCCCGCATTTTTGCGGC TTTTTGCCGCCGTGGCTTTTGGCCCCCGCCACTGTGGCTTTTTACGCCTTTTTCGCCCCCGCCGCCGCAGGTTTTT TATTTGTCCCTGCCACCACAGCTTTTTGCCCCCGCCGCCGCCGCTCCTTGCCCCCTACGTGGCTTCCTGTCCCCG $\tt CCTCCGCGGCTTTTTATCACCCCAGCCGCTTTTTGCCCCCGCCGCCACGGGTTTTTGCTCCTGCCGCCGAGGGTT$ TTTGCGCCTTCATGTCCCCACCGTCGTGGCTTTTTGCCGCCCCTGCTTTTTTGCCCCCCTCTGACGCGGCTTTTTGC GGCTTTTTACCACCTCCACCGTGGCTTTTTGCGCTTTTTGGCACCGGACGCCATGGCTTTTTCAGGCTTTTTGCC $\tt CCGCCGCCACGGCTTTTGCTGCCGCCACACCGTTTAGCCCCCACCGCGCCTTTTTGCACCCGCAGCCGCATCTT$ TTTGCCGCCGCGACTTCTTACCCCGCCACCGCGGTTTTTACCGCTGAGGCTTTTTCACCCCGCCGTCGCGGGTTT TTGCCCCCACCGCCGTGGCTTTTTTGCCCCCACCGCCGCGGGTCTGAGGGCGGGATTGGCAGACTCGGCTGCTAGA ${\tt TCTACCGGCGTCCTGGCTAAGGCAGCGCCGACGGTCACTCCTGGTCCAGCTCTCCTGGTTCGGGGGCTGCATAGA}$ GGCGCAGGGGCCGCAGCCAGCCGGGTGCTGCAGCAGTGCGGGCAGCTCCAGAAGCTCATTGGCATCTCCTTTGGC AGCCTGCGTTGGCTGCGCACCAAGTGCGCTGAGTCCAAAGACCTCACCCAGCAGGAGATACGGACCGTGCAGGAT ${\tt GAGTCCGAGGGGCTCCTAGGCACAGAGGGGCCCCTGGAGGAGAAGAGAGGATGGAGAGGAGCTCATTGGAGATGGC}$ ATGGAAAGGTAA

ATGGATGAGGACAGCTGTGTCAATGCCCAGGCCACGGGAACTCCACTTGCTAAACAGAATGTTATCCCGGAAATC TGTGCCCTTCTCTGTATGCCTCTTGTCCTTTTTTCACTGCCCTATTCAGTAACTTCACAAATATAATGAGCAC $\tt CTGCCAAGAACCATGTCAGGCCTGGGGGCAACAAACAGCCCCTGCTGTCAAGGAACCCGCAGGCTTGTGGGGCCGT$ CATGCTATCAAAAGGCAGCTCCAAGAGAGACAGTGGGGATGAGTGTCAAACAGATGTTTCAGCCAAGTATGGCAGG $\tt CCCTGTGCGCTGCCAGAATGTCTTCCTGAACACAGCTATGACTGGGCCTACTGGCCTTGGCTGTTTGATCTA$ AGCAGAGGCCTAACTGAGACTGAACTAAGCATTTTTCCTCTCCCAGGAATTGGAATTTTGGAACCACGAATGAGC ${\tt ACCTCTGCAGCCAAGGCCCATGAGCAATGGCACCCTGGAGGAGGAGCCCAAGAAGCCTGGTTCCAGCCCCT}$ TTCACCGCCCGGGGTGCCACGGCCCTTTCAACGTGTATGGCAGGAGGTGTGCAGGGCATTCAGGAGGCCTCCTGG GAATGCCAGCTCTGCTTGGCCCGGATCCTGTTTGAATTCTTCGGCCAAGTGAGGTACAGACCAGGGCCCTATGAA CACCTGCAAGCAAGACAGCCACGCAGTTGTGGGTCACCTTGGAAGAATATTGGAGAATGCAAGAGAAACAGGGC CTCATATTTAAGGTTTTACTATGCCCAAACAGAAATCCTGATGGGAAAGGAAAATGCCTTGCTATATCTGTAATT TATCAACATGAAAACATTACGGTTTTAATCATAAAATTCAAGAGATTTAACTTGTTTGCCATCAGTTCTCCACCA AGGAAAGATAAGTTGATATTGCCAGCCTTTCATGAGCTTCCTCCTAACAGTAGGCTTATCGCCTTTGCACATTCC GGGCAAACAGAAGCCAGAAAATCCTGCCAAAAAACCTTTCATCTGGTCAGGGAGTGGAGGCCGTGCTGTGCGCGCC CTCTTGCGGGAGCCACCAGGCAAGCATCTTAAGAGGGGCAAGCGGAAAAGGGTGTCTGTGGATCTGCCCTGTTCT GAGCCTTAG

CAGAAGAAGCCCTTTGAGGAGCACTGGAGGAAGCACCCCTGTCCTATGTGGACGTTGGCACTGGGAAGTGCACA ACTATTGGCACACGCAGCAGCTTGAATAAATCTGAAAGTCACTATGCTGTGTAAGAGAAGCCAAATTTAAAAAGT GCATGCTGTGTACAGAGGGTGTCAAGAATGCCTCCTACGTGACGGAAAGCAGATCCGTGGTTGCCTGCAGACTGG CAGGAGCAGATTCCAAAGGCACAGGAAGAAGCTTGTGGGTAGAATGTGTTCATTACCTTCTGTGCATTATACCAT AAAAAAGCTGGTCACAAAAATGCAAACCAAAAACAAAGGTGAAACTAGGATAAGATTTCTCACCTGTGTGATTGG TAAACGTGCAGATGTGCCGTCATGCTTTGTTTATGAAGCTGTGGGATACAAGGACTCTCATACGTCACTGTGGAA TGCAGAATATTGCAGCCTCATGGAAGAGGATTTGGCAGCGTCTAACAAAACTACATGGCATTTGCCCTTTGACTC AGCAATTCTAGAATCTGCCTCAAAAAAACTCCAGCAAAGAAATGAAAGGACTTTAGGCACAGAGTTCTTTTCACA GCCTGCATGTTTTGCAACAAGTTCTTCACTGTGGCGTTTGTAAATGTGGGGAAAAGAGAGATCAGGCTGGTAC TGTGTCTGTGTAGAAAAGGAGGACGTAAGAAACTCCATTTTGATCTGTACCCCGAGCGATTGTTTTGCCCTGAGA TGCTGTTAATCTGTAACTTTAGCCCCAGCCTTGAGCTCACAGAAACCTGTGTTGTATGGAATCAAGGTTTCAGGG ATCTAGGGCTGTGCAGGACGTGCCTTGTTAAGAAAATGCTTACAGGCAGTACGCTTGGTAAAAGTTATCGCCATT CTCCATTCTCGATAAACCAGGGGCACAATGCACTGCGGAAAGCCGCAGGGACCTCTGCCCAGGAAAGCCGGGTAC CATCCAAGGTTTCTCCCCACTGAGATATGGCCTTGTGGGGATGGGAAAGACCTGACCATCCACCAGCCCGACACCC GTGAAGGATCTGTGCTGAGTAGGATTAGTAAAAGAGGAAGGCCTCTGTCTCCTGCCTTCCCCTGGGAACGGAATG TCTCAGTATAAAACTGATCGTACATTTGTTCAATTCTGAGATAGGAGAAAAACCACCCTGTGGTGGGAGGCGAGA CATGTTGGCCGCAATGCTGCTGTTACTCTTTACTCCACTGAAATGTTTGGGTGGAGAGAAGCATAAATCTGGCCT CTGACCTTCTCCCCACTGTCACCCTGTTCTCCTGCCACATTCCTCTTGCTGAGATAGTGAAAATAGTAATCAATA AATACTGAGGGAACTCAGAGACCGGTGCCAGTGCGGGTCCTCTGTATGCTGAGCGCCAGTCCCCTGGGCCCACTT TTCTTTCTCT

FIGURE 1535

AATAAAGAAATAGTGCTTTAAGTCAATGAATTCCTCCTTGGGACCCACTATCGAGAAACTATCAGTGGTAACGTT TTAAAAATGACAAATTCAATCTGCTCTTGACTTGTGTGTCCTAAGATTTCCACTAAGTGTCTTCAAACCTCCCC CTCCCCGGCTTCCTGGATAATAGAAGTTCCCGAAGGCCGCCGATTCCAGAAGATACTGTCTGGCGTGAAATTAGT CTCAGTAGAAACATAAGTCCCGCGCGTCTTGTGCTGCGCGTGCGCAAGCTTTTGGGCCCTCCCGAGAAAGGGAAG TGCATTCTCGCTTCCGTAGCGGTCTCCGCCGGTTGGGGGGAAGTAATTCCGGTTGTTGCACCATGGCGTCCATGG GGACCCTCGCCTTCGATGAATATGGGCGCCCTTTCCTCATCATCAAGGATCAGGACCGCAAGTCCCGTCTTATGG GACTTGAGGCCCTCAAGTCTCATATAATGGCAGCAAAGGCTGTAGCAAATACAATGAGAACATCACTTGGACCAA ATGGGCTTGATAAGATGATGGTGGATAAGGATGGAGATGTGACTGTAACTAATGATGGGGCCCACCATCTTAAGCA TGATGGATGTTGATCATCAGATTGCCAAGCTGATGGTGGAACTGTCCAAGTCTCAGGATGATGAAATTGGAGATG GAACCACAGGAGTGGTTGTCCTGGCTGCCTTGTTAGAAGAAGCGGAGCAATTGCTAGACCGAGGCATTCACC CAATCAGAATAGCCGATGGCTATGAGCAGGCTGCTCGTGTTGCTATTGAACACCTGGACAAGATCAGCGATAGCG TCCTTGTTGACATAAAGGACACCGAACCCCTGATTCAGACAGCAAAAACCACGCTGGGCTCCAAAGTGGTCAACA GTTGTCACCGACAGATGGCTGAGATTGCTGTGAATGCCGTCCTCACTGTAGCAGATATGGAGCGGAGAGACGTTG ACTTTGAGCTTATCAAAGTAGAAGGCAAAGTGGGCGGCAGGCTGGAGGACACTAAACTGATTAAGGGCGTGATTG TGGACAAGGATTTCAGTCACCCACAGATGCCAAAAAAAAGTGGAAGATGCGAAGATTCCAATTCTCACATGTCCAT $\tt TTGAACCACCCAAACCAAAACAAAGCATAAGCTGGATGTGACCTCTGTCGAAGATTATAAAGCCCTTCAGAAAT$ ACGAAAAGGAGAATTTGAAGAGATGATTCAACAAATTAAAGAGACTGGTGCTAACCTAGCAATTTGTCAGTGGG GCTTTGATGATGAAGCAAATCACTTACTTCTTCAGAACAACTTGCCTGCGGTTCGCTGGGTAGGAGGACCTGAAA TTGAGCTGATTGCCATCGCAACAGGAGGGCGGATCGTCCCCAGGTTCTCAGAGCTCACAGCCGAGAAGCTGGGCT $\tt TTGCTGGTCTTGTACAGGAGATCTCATTTGGGACAACTAAGGATAAAATGCTGGTCATCGAGCAGTGTAAGAACT$ CCAGAGCTGTAACCATTTTTATTAGAGGAGGAAATAAGATGATCATTGAGGAGGCGAAACGATCCCTTCACGATG $\tt CTTTGTGTGTCATCCGGAACCTCATCCGCGATAATCGTGTGGTGTATGGAGGAGGGGCTGCTGAGATATCCTGTG$ CCCTGGCAGTTAGCCAAGAGGCGGATAAGTGCCCCACCTTAGAACAGTATGCCATGAGAGCGTTTGCCGACGCAC TGGAGGTCATCCCCATGGCCCTCTCTGAAAACAGTGGCATGAATCCCATCCAGACTATGACCGAAGTCCGAGCCA GACAGGTGAAGGAGATGAACCCTGCTCTTGGCATCGACTGTTTGCACAAGGGGACAAATGATATGAAGCAACAGC ATGTCATAGAAACCTTGATTGGCAAAAAGCAACAGATATCTCTTGCAACACAAATGGTTAGAATGATTTTGAAGA TTGATGACATTCGTAAGCCTGGAGAATCTGAAGAATGAAGACATTGAGAAAACTATGTAGCAAGATCCACTTCTG CTATAATAAAAATAGCTGTTTGGTAACCATAGTTTCACTTGTTCAAAGCTGTGTAATCGTGGGGGTACCATCTCA ACTGCTTTTGTATTCATTGTATTAAAAGAATCTGTTTAAACAACCTTTATCTTCTCTTCGGGTTTAAGAAACGTT TATTGTAACAGTAATTAAATGCTGCCTTAATTG

FIGURE 1536

MASMGTLAFDEYGRPFLIIKDQDRKSRLMGLEALKSHIMAAKAVANTMRTSLGPNGLDKMMVDKDGDVTVTNDGA
TILSMMDVDHQIAKLMVELSKSQDDEIGDGTTGVVVLAGALLEEAEQLLDRGIHPIRIADGYEQAARVAIEHLDK
ISDSVLVDIKDTEPLIQTAKTTLGSKVVNSCHRQMAEIAVNAVLTVADMERRDVDFELIKVEGKVGGRLEDTKLI
KGVIVDKDFSHPQMPKKVEDAKIAILTCPFEPPKPKTKHKLDVTSVEDYKALQKYEKEKFEEMIQQIKETGANLA
ICQWGFDDEANHLLLQNNLPAVRWVGGPEIELIAIATGGRIVPRFSELTAEKLGFAGLVQEISFGTTKDKMLVIE
QCKNSRAVTIFIRGGNKMIIEEAKRSLHDALCVIRNLIRDNRVVYGGGAAEISCALAVSQEADKCPTLEQYAMRA
FADALEVIPMALSENSGMNPIQTMTEVRARQVKEMNPALGIDCLHKGTNDMKQQHVIETLIGKKQQISLATQMVR
MILKIDDIRKPGESEE

MAEKFDHLEEHLEKFVENIRQLGIIVSDFQPSSQAGLNQKLNFIVTGLQDIDKCRQQLHDITVPLEVFEYIDQGR NPQLYTKECLERALAKNEQVKGKIDTMKKFKSLLIQELSKVFPEDMAKYRSIRGEDHPPS

FIGURE 1539

GGGATTTGTTATTGCGAATGATGTGGACAACAAGCGCTGCTACCTGCTCCATCAAGCCAAGAGGCTGAGCAG GATCCTCTTCTATGATCGAATTTTATGTGATGTCCCTTGCAGTGGAGACGCCACTATGAGAAAAAACATTGATGT TTGGAAAAAGTGGACCACCTTAAATAGCTTGCAGCTACATGGCTTACAGCTGCGGATTGCAACACGCGGGGCTGA ACAGCTGGCTGAAGGTGGAAGGATGGTGTATTCCACGTGTTCACTAAACCCTATTGAGGATGAAGCAGTCATAGC ATCTTTACTGGAAAAAAGTGAAGGTGCTTTGGAGCTTGCTGATGTGTCTAATGAACTGCCAGGGCTGAAGTGGAT GCCTGGAATCACACAGTGGAAGGTAATGACGAAAGATGGGCAGTGGTTTACAGACTGGGACGCTGTTCCTCACAG CAGACACCCCAGATCCGACCTACCATGTTCCCTCCGAAGGACCCAGAAAAGCTGCAGGCCATGCACCTGGAGCG ATGCCTTAGGATATTACCCCATCATCAGAATACTGGAGGGTTTTTTGTGGCAGTATTGGTGAAAAAATCTTCAAT GCCGTGGAATAAACGTCAGCCAAAGCTTCAGGGTAAATCTGCAGAGACCAGAGAAAGCACACAGCTGAGCCCTGC AGATCTCACAGAAGGGAAACCCACAGATCCCTCTAAGCTGGAAAGTCCGTCATTCACAGGAACTGGTGACACAGA TGAGAAATTTTATGCTTTGGATCCTTCATTCCCAAGGATGAATTTGTTAACTCGGACTACAGAAGGGAAGAAAAAG GCAGCTCTACATGGTTTCTAAGGAGTTGCGGAATGTGCTGCTGAATAACAGTGAGAAGATGAAGGTTATTAACAC GGGGATCAAAGTCTGGTGTAGAAATAACAGCGGTGAAGAGTTTGACTGTGCTTTCCGGCTGGCACAGGAGGGAAT ATATACATTGTATCCATTTATTAACTCAAGAATTATTACTGTATCAATGGAAGATGTTAAGATACTGTTGACCCA GGAAAATCCCTTTTTTAGAAAACTCAGCAGTGAGACCTACAGTCAAGCAAAGGACCTGGCAAAGGGAAGCATCGT GCTGAAGTATGAACCAGATTCTGCGAATCCAGACGCTCTGCAGTGTCCCATCGTCTTATGCGGATGGCGGGGAAA GGCCTCCATTCGAACTTTTGTGCCCAAGAATGAACGGCTTCATTATCTCAGGATGATGGGGCTGGAGGTATTGGG TGAGGGACAGAGCCAGAGAGCCCAGATGCAGAAGAGGCCCAACAGTCCAGACGTGACAGCAGCTG TGACCCGGCGGGGGTCCATCCACCCCGGTGAGCAGGCCCAAGGCAGCGGGGGCCCACACCCCTCACACGCAAAAC TGGCTTCTTCTGGTCACTGGTGTCTGAAACCAAATCCAGAGCAGCCTGTGGCCTGTAAAGCATATATTTCTAATG CTTTTAGCGTGTTAGAAATCACTTGTTTTATTTTGTTTCTTTGGCCAAGCTGGGTCTAGTGTTTCTTTTGCTGGG AATAGACTTTCAAAAGTTGTACTTCTATCAAGAAACAAAACTGCCCTTGCAGAAATTTCAGGTCTTTTGTTAAGC GTTATAAGCTTTAATAATTACATTGAGCTGCACCTCAGTGGTGTGTCATTAACATGCAGTGGGGTTAATATCTGA GGCCTCAGATGACTTTGTGCCTTTTGGAATAAAGGGTAAAATAAACTCTCCCAGAGTAAGAGCTGTATCGTGAAT IGTCATACTAATTATTGAGGGGGACTTATGTGCTTTTATTGAATGGAGTGCTTTACAATTTTTATTTTTAAATGG GGTTGGGATCCTTGGAATATTTCAATAAAATTGATAAAATAT

FIGURE 1540

TCCTGCTTCGCCCTCCCAGCGCCTAGAAGCCTGCAGCTCCGGAGCAGTGGCCGCCCACGCCGCCCCAGCGCCC CCTCGGCTCCCCAGTTCTTGATGGCCACCAACTCCCTGAGCACGTGCTGCGAGTCCGGAGGCCGCACGCTGGCGG ACTCCGGGCCCGCCTCGGCCCAGGCGCCGGTCTACTGCCCGGTCTACGAGAGCCGGCTGCTGGCCACCGCGC GCCACGAGCTCAACTCGGCCGCGCGCGCTCTATGGGGGGTCCCTATGGCGGATCGCAGGGCTATGGCAACT ACGTGACCTACGGCTCGGAGGCGTCCGCCTTCTACTCGCTGAACAGCTTTGATTCCAAGGATGGTTCGGGATCTG CGCATGGGGGCCTGGCACCAGCCGCCTACTACCCTTACGAGCCAGCTCTGGGCCAGTACCCCTATGACA TGCAGGAGCACCGCAAGAACCCCTACCCCACCAAGGGCGAGAAGATCATGCTGGCCATCATCACCAAGATGACCC TCACACAGGTCTCCACCTGGTTCGCCAACGCGCGCCGCCGCCTCAAGAAGGAGAACAAGATGACGTGGCCGCCGC AGGAGCCCCTCAAGAGCTCCAAGAACGCAGAGCCCGTGGGCAAAGAGAGGAGAGGAGCTGGAGCTTAGTGACTTGG ACGACTICGACCCGCTGGAAGCAGACCCGCCGGCGTGCGAGCTGAAGCCGCCCTTCCACTCCCTGGACGGCGGTC TGGAGCGCGTCCCGCCGCCGCCGACGGCCCGGTCAAGGAGGCCTCAGGCGCGCTCCGGATGTCTCTGGCCGCGG GTGGCGGAGCTGCTCTGGACGAGGACCTGGAGAGGGCCCGGAGCTGTCTCCGCAGCGGCGGCGGGCCGGGCCGGAGC CACTGCCGGGCGCAGAGGGCGGCCCTCAGGTCTGCGAGGCCAAGCTGGGGTTTGTGCCGGCGGGGGGCGTCGGCAG GCCTGGAGGCTAAGCCGCGCATCTGGTCCCTGGCCCACACAGCCACCGCCGCCGCCGCCGCCGCCACCTCCCTGA GCCAGACTGAGTTTCCGTCGTGCATGCTCAAGCGCCAAGGTCCCGCGGCCCCTGCGGCTGTGTCCTCCGCGCCCCG CCACGTCCCCGTCTGTGGCCCTTCCCCACTCTGGCGCCCTGGACAGGCACCAGGACTCCCCGGTAACCAGTCTCA GAAACTGGGTGGACGGGGTCTTCCACGACCCCATCCTCAGGCACAGCACTTTGAACCAGGCCTGGGCCACCGCCA AGGCCGGCGAAACCCTTCTGCGCCTGAGGCGGGCGGGTCCCGAGCCCAGGAGGGAACCCGCGCTCAGGCGGAC GGCGCCGACTCTTTTCACTGAGTTTCCAGAGGAAGACTAGCGCGGCCACCGCGAAGCCCAACCCACCGGAGAG GGGGCTTCTGAACTTGGACTCCTGGGAACATGGACAAGCCCGGCGCTGCCACGCCGGGGCCTCCACCGCCTGGGC CTGAGCCTGACCGGGCCATTCCCAAATTTGGGACGCGGAAGGAGAGGCTCTCGGAGCAGAAGAGGCCAGATACCC TGAAGCATAAAGTTTACGTCAAAAGTTTACATGGAGAAGGCGGTTCCGTTCTGAAGCGTGGTCTGCTGTCCCCTG GGCGTGAGGCCTCCTGGGCCTGGGGCCTCCGATTTCATCCTCAGCACGTAATGCTCACCAACAGCACTTGCAC GCTTCAGAGGCTAATATAACAAAACCAATAAAACCGAG

GACTGCGCGGCGCAACAGCAGACATCTCGGGGGGTCCGGGGCCTGTCGCGGCTGCTGAGCGCTCGGCGCCTGGCG GCATCTGCTAAAGTTTCAGATTCCATTTCTGCTCAGTATCCAGTAGTGGATCATGAATTTGATGCAGTGGTGGTA GGCGCTGGAGGGCAGGCTTGCGAGCTGCATTTGGCCTTTCTGAGGCAGGGTTTAATACAGCATGTGTTACCAAG ACGGAGCAGGCCCCCCCCCCCCGTGGTCGAGCTAGAAAATTATGGCATGCCGTTTAGCAGAACTGAAGATGGGAAG GCTGATCGGACTGGCCACTCGCTATTGCACACCTTATATGGAAGGTCTCTGCGATATGATACCAGCTATTTTGTG GAGTATTTTGCCTTGGATCTCCTGATGGAGAATGGGGAGTGCCGTGGTGTCATCGCACTGTGCATAGAGGACGGG TCCATCCATCGCATAAGAGCAAAGAACACTGTTGTTGCCACAGGAGGCTACGGGCGCACCTACTTCAGCTGCACG ${\tt TCTGCCCACACCAGCACTGGCGACGGCCATGATCACCAGGGCCATGCCTTGCCAGGACCTAGAGTTT}$ GTTCAGTTCCACCCTACAGGCATATATGGTGCTGGTTGTCTCATTACGGAAGGATGTCGTGGAGAGGAGGCATT $\tt CTCATTAACAGTCAAGGCGAAGGTTTATGGAGCGATACGCCCCTGTCGCGAAGGACCTGGCGTCTAGAGATGTG$ GTGGACGTCACGAAGGAGCCGATCCCTGTCCTCCCCACCGTGCATTATAACATGGGCGGCATTCCCCACCAACTAC AAGGGGCAGGTCCTGAGGCACGTGAATGGCCAGGATCAGATTGTGCCCGGCCTGTACGCCTGTGGGGAAGGCCGCC TGTGCCTCGGTACATGGTGCCAACCGCCTCGGGGCAAACTCGCTCTTGGACCTGGTTGTCTTTGGTCGGGCATGT GCCCTGAGCATCGAAGAGTCATGCAGGCCTGGAGATAAAGTCCCTCCAATTAAACCAAACGCTGGGGAAGAATCT GTCATGAATCTTGACAAATTGAGATTTGCTGATGGAAGCATAAGAACATCGGAACTGCGACTCAGCATGCAGAAG TCAATGCAAAATCATGCTGCCGTGTTCCGTGTGGGAAGCGTGTTGCAAGAAGGTTGTGGGAAAATCAGCAAGCTC TATGGAGACCTAAAGCACCTGAAGACGTTCGACCGGGGAATGGTCTGGAACACGGACCTGGTGGAGACCCTGGAG CTGCAGAACCTGATGCTGTGCGCTGCAGACCATCTACGGAGCAGAGGCACGGAAGGAGTCACGGGGCGCGCAT GCCAGGGAAGACTACAAGGTGCGGATTGATGAGTACGATTACTCCAAGCCCATCCAGGGGCAACAGAAGAAGCCC TTTGAGGAGCACTGGAGGAAGCACCCTGTCCTATGTGGACGTTGGCACTGGGAAGGTCACTCTGGAATATAGA TTCATACGCTTCTGCACTCTGGGGAAGAAGGAGTACATTGAAGGGAGATTGGCACCTAGTGGCTGGGAGCTTGCC AGGAACCCAGTGGCCAGGGAGCGTGGCACTTACCTTTGTCCCTTGCTTCATTCTTGTGAGATGATAAAACTGGGC ACAGCTCTTAAATAAAATATAAATGA

MSGVRGLSRLLSARRLALAKAWPTVLQTGTRGFHFTVDGNKRASAKVSDSISAQYPVVDHEFDAVVVGAGGAGLR
AAFGLSEAGFNTACVTKLFPTRSHTVAAQGGINAALGNMEEDNWRWHFYDTVKGSDWLGDQDAIHYMTEQAPAAV
VELENYGMPFSRTEDGKIYQRAFGGQSLKFGKGGQAHRCCCVADRTGHSLLHTLYGRSLRYDTSYFVEYFALDLL
MENGECRGVIALCIEDGSIHRIRAKNTVVATGGYGRTYFSCTSAHTSTGDGTAMITRAGLPCQDLEFVQFHPTGI
YGAGCLITEGCRGEGGILINSQGERFMERYAPVAKDLASRDVVSRSMTLEIREGRGCGPEKDHVYLQLHHLPPEQ
LATRLPGISETAMIFAGVDVTKEPIPVLPTVHYNMGGIPTNYKGQVLRHVNGQDQIVPGLYACGEAACASVHGAN
RLGANSLLDLVVFGRACALSIEESCRPGDKVPPIKPNAGEESVMNLDKLRFADGSIRTSELRLSMQKSMQNHAAV
FRVGSVLQEGCGKISKLYGDLKHLKTFDRGMVWNTDLVETLELQNLMLCALQTIYGAEARKESRGAHAREDYKVR
IDEYDYSKPIQGQQKKPFEEHWRKHTLSYVDVGTGKVTLEYRPVIDKTLNEADCATVPPAIRSY

TTTACGATATCCAAATAAACTGGACACCATCACATGGACGTGGCAAGGACCTGGAGCGCTGGAAATCCTGTGGCT ${\tt GTTCGAGGACTGCCAGCTGGCCGGAAGGACAGCTCCGTCTCCCCGCTGACACTTGCCTTTTAGAATTTGC}$ CAGGCTCGTGCGGGCCTCGGGCTAAAACCAGAAAAGCTTGAAAAAGATCTGGACAGATACTCAGAAAGAGCCAG GATGAAGGGAGGAGAGATAGGTATTGCGGAGTTTGCCGCCTCCCTGGAAGTCCCCGTTTCTGACTTGCTGGA CGTCTGCCGGCCCGGCCCGGACCCTGGACACCATCCAGCTGGCTTTCAAGATGTACGGAGCGCAAGAGGACGGCAG CCGAGCCATTGACCAAGAGAGAGAGGGGAAGATCACATTCGCTGACTTCCACAGGTTTGCAGAAATGTACCCTGC CTTCGCAGAGGAATACCTGTACCCGGATCAGACACATTTCGAAAGCTGTGCAGAGACCTCACCTGCGCCAATCCC ${\tt AAACGGCTTCTGTGCCGATTTCAGCCCGGAAAACTCAGACGCTGGGCGGAAGCCTGTTCGCAAGAAGCTGGATTA}$ GGACCCAGGGTTGCGGAGAGACGCGGCCCCTCCCGCGTGGACATCACCGCCATGAGCCTCTTTGCGAGTGACCTC TGGGCTCCGCTCCTCACTCCTGCTGTACAGGCACTGTCTTCAGCCCGAGTTCCAGGGGCCTCGGGGGCTGTTTGT ATCTTGTTCCTTTGTGAAGTGTGTTGCAGAACCGACGCTTACTGTGCGAGAATCGGAGGGCGCGCACGCGGATCC CAGCACACGCCTGCCACACAGCGTGCGCTTGCGTGTCACTCTGGCACGAAACCTGTCTGCCTCTGTGGATCCACA GCCTGGCAGAGCCGAGCCGTCACCTGATTTTTCAGTGTTTCTACCTGTGTGCTGGAGCTCATGAGTATTTTATAA ACTCCATTTAGGTACTTCAGGAAACATGCAGCATTTTTTAAAAAATGAAAATTGTTTTTCTACTTCATTTTTCCT TAAATTTCCATCAGGCCTCTCCCAGCAGGTAATCCCTCTCCTTCCGCTGGGTCCCCTGGGGAGGTGTGAACTCA AGGGCCTAGCCCCAAAACACTTTTTCTGCTTTTCTTAATCCTTTTCCAGTCCCCTCTTTTTTTAAAACGTTGGC AGTTTGATGTTTCTGTTTCGGCATAACGTAATCCATTTCACTGTAGCCTAAACTCCAGTCCGAGGTTGGATATTG TTCAAATGAGCAGGGCCCGAGCTGGAAGCGCAAGGCAGCCGCCGCGTGCCGCTCCTCCCTTGCCCTCAGGCCAG GTCCCTGCTGGAAGCGGCTGCATCTTCCTGTCAGCCCTGGTTTCCATGGTGACTGGCGTCACGCTGCCACCCGAG TATGGCTGACCTTCCTGCAGAGAGAGGAGCCGCAGTCTTTTGCTTGTGGAAGGAGACGCTGGGCTGTGCGGTGCG GAGGGTGATGAGGATGTCTGGTGACAGCCGTGCGGACACCACTCCTCTCTGCAGCACTGCCTCCCAGCGCCAGGG $\tt TCGCGGGCACATCCCACTGAGAGCGGGGGTCCTGCCCCATCTTAGAGTCAAAGGCAGAGGGGCTTCCAGGCCCTG$ GATGGGGTATTTTGGTGTCACCTGAAGTCCCTCTGACATCACCTTGTTTCATCATTTTTTATGACAGAATTAGAA AAATTTTTTTGATTTCTGAAATGAATTGATTTTTATATTTGGGGCATCTCTATAGAAAGTGACCACCAAGGCCAG GGATGGAGTAAACCGAAGTCAATTTCAGGGCTCTTGGCGTGTTGGACACAGAAGAAATCCTAGTGCAGCCTTTGG TAGCTAACAGTCACTGATTTTATAATTGGAGAATGCGTAAAGATTCATTTTTCAAGGAGAAGAGCCTGCAAATGG CCAATGAAGGAGGTAAATAAACTAAGATATTCCGAGGGAAGGGACCCAGGCCACCTCCCTTCCGCAGGTCTGCAG ATGTTTGTTCCTCCTGATTCTCTTTTCTCTTCGTGGCGACTTAGAGTTGGCGGATATTCGGAACTGTGAATGTAC ATAGCGTTGAGTTAAACCCCTTGTGTGTGAGACAGGACGCAGCCGGGCCCCTGGTGGCCTGGGGGCCAGACCCGTG ACTTGGGATTTTCAATGGAATAAGTAAAACATAAAGTCTATACTTGGG

GCTTGGTGGTGGGCGTGTTCGTGGTCTACGTGGTGCACACCTGCTGGGTCATGTACGGCATCGTCTACACCCGCC AATTTGAAAGGACAGTTAATGTTTCTGTACCAAAGAAAACGAGAAACAATGGGACGCTGTATGCCTACATCTTCC TCCATCACGCTGGGGTCCTGCCGTGGCACGACGGGAAGCAGGTGCACCTGGTCAGTCCTCTGACCACCTACATGG TCCCCAAGCCAGAAGAAATCAACCTGCTCACCGGGGAGTCTGATACACAGCAGATCGAGGCGGAGAAGAAGCCGA $\tt CGAGTGCCCTGGATGAGCCAGTGTCCCACTGGCGACCGCGGCTGGCGCTGAACGTGATGGCGGACAACTTTGTCT$ TTGACGGGTCCTCCCTGCCTGCCGATGTGCATCGGTACATGAAGATGATCCAGCTGGGGAAAACCGTGCATTACC TGCCCATCCTGTTCATCGACCAGCTCAGCAACCGCGTGAAGGACCTGATGGTCATAAACCGCTCCACCACCGAGC TGCCCCTCACCGTGTCCTACGACAAGGTCTCACTGGGGCGGCTGCGCTTCTGGATCCACATGCAGGACGCCGTGT ACTCCCTGCAGCAGTTCGGGTTTTCAGAGAAAGATGCTGATGAGGTGAAAGGAATTTTTGTAGATACCAACTTAT GTTTCTGGAAGAAGAAGAAGAGCATGATCGGCATGTCCACCAAGGCAGTGCTCTGGCGCTGCTTCAGCACCGTGG TCATCTTTCTGTTCCTGCTGGACGAGCAGACGAGCCTGCTGGTGCTGGTCCCGGCGGGTGTTGGAGCCGCCATTG AGCTGTGGAAAGTGAAGAAGGCATTGAAGATGACTATTTTTTGGAGAGGCCTGATGCCCGAATTTCAGTTTGGCA CTTACAGCGAATCTGAGAGGAAAACCGAGGAGTACGATACTCAGGCCATGAAGTACTTGTCATACCTGCTGTACC $\tt CTCTCTGTGTCGGGGGGTGCTGTCTATTCACTCCTGAATATCAAATATAAGAGCTGGTACTCCTGGTTAATCAACA$ GCTTCGTCAACGGGGTCTATGCCTTTGGTTTCCTCTTCATGCTGCCCCAGCTCTTTGTGAACTACAAGTTGAAGT CAGTGGCACATCTGCCCTGGAAGGCCTTCACCTACAAGGCTTTCAACACCTTCATTGATGACGTCTTTGCCTTCA TCATCACCATGCCCACGTCTCACCGGCTGGCCTGCTTCCGGGACGACGTGGTGTTTCTGGTCTACCTGTACCAGC CATTTGGAGGAATTCCTAGACATTGCGTTTTCTGTGTTGCCAAAATCCCTTCGGACATTTCTCAGACATCTCCCA AGTTCCCATCACGTCAGATTTGGAGCTGGTAGCGCTTACGATGCCCCCACGTGTGAACATCTGTCTTGGTCACAG AGCTGGGTGCCGGTCACCTTGAGCTGTGGTGGCTCCCGGCACACGAGTGTCCGGGGTTCGGCCATGTCCTCA TTATGTGAATTTCAAACACGTATGGAATTCATTCCGCATGGACTCTGGGATCAAAGGCTCTTTCCTCTTTTGTTT

MWSGRSSFTSLVVGVFVVYVVHTCWVMYGIVYTRPCSGDANCIQPYLARRPKLQLSVYTTTRSHLGAENNIDLVL
NVEDFDVESKFERTVNVSVPKKTRNNGTLYAYIFLHHAGVLPWHDGKQVHLVSPLTTYMVPKPEEINLLTGESDT
QQIEAEKKPTSALDEPVSHWRPRLALNVMADNFVFDGSSLPADVHRYMKMIQLGKTVHYLPILFIDQLSNRVKDL
MVINRSTTELPLTVSYDKVSLGRLRFWIHMQDAVYSLQQFGFSEKDADEVKGIFVDTNLYFLALTFFVAAFHLLF
DFLAFKNDISFWKKKKSMIGMSTKAVLWRCFSTVVIFLFLLDEQTSLLVLVPAGVGAAIELWKVKKALKMTIFWR
GLMPEFQFGTYSESERKTEEYDTQAMKYLSYLLYPLCVGGAVYSLLNIKYKSWYSWLINSFVNGVYAFGFLFMLP
QLFVNYKLKSVAHLPWKAFTYKAFNTFIDDVFAFIITMPTSHRLACFRDDVVFLVYLYQRWLYPVDKRRVNEFGE
SYEEKATRAPHTD

WO 2004/030615 PCT/US2003/028547

1674/6881 FIGURE 1548

FIGURE 1549

CGACACAGTAGCATTTGTGCCAATTTCTGGTTGGAATGGTAACAACATGCTGGAGCCAAGTGCTAACATGCCTTG
GTTCAAGGGATGGAAAGTCACCCGTAAGGATGGCAATGCCAGTGGAACCATGCTGCTTGAGGCTCTGGACTGCAT
CCTACCACCAACTCGTCCAACTGACAAGCCCTTGCGCCTCTCCAGGATGTCTACAAAATTGGTGGTATTGG
TAGTGTTCCTGTTGGCCGAGTGGAGACTGGTATTCTCAAACCCGGTATGGTGGTCACCTTTGCTCCAGTCAACGT
TACAACAGAAGTAAAATCTGTCGAAATGCACCATGAAGCTTTTGGGTGAAGCTCTTCCTGGGGACAGTGTGGGCTT
CCATGTCAAGAATGTGTCTGTCAAGGATGTTCGTCGTGGCAACGTTGCTGGTGACAGCAAAAATGACCCACCAAT
GGAAGCAGCTGGCTTCACTGCTCAGGTGATTATCCTGAACCATCCAGGCCAAATAAGCGCTGGCTATGCCCCTGT
ATTGGATTGCCACACGGCTCATATTGCATGCAAGTTTGCTGAGCTGAAGGAAAAAGATTGATCGCCGTTCTGGTAA
TATGGTTCCTGGCAAGCCCATGTGTGCTGAGAGCTTCTCAGACTATCCACCTTTGGGTCGCTTTTGCTGTCAGACTACAAGC

FIGURE 1551

CTTTTCACAACGGGTTTGCCGCCAGAACACAGGTGTCATGAAAACTACCCCTAAAAGCCAAAATGGGAAAGGAA
AAGACTCATATCAACATTGTCGTCATTGGACACGTAGATTCGGCCAGTCCACCACTACTGGCCATCTGATCTAT
AAATGCAGTAGCATCGACAAAAGAACCATTGAAAAATTTTGAGAAGGAGACTGCTGAGATGGGAAAGGGCTCTTTC
AAGTATGGCTGGGTCTTGGATAAACTGAAAGCTGACGTGAACGTGGTATCACCATTGATATCTCCTTGTGGAAA
TTTGAGACCAGCAAGTACTATGTGACTATCACTGATGCTCCAGGGATGTCTACAAAAATTGGTGGTATTGGTAGTG
TTCCTGTTGGCCGAGTGGAGACTGGTATTCTCAAACCCGGTATGGTGGTCACCTTTGCTCCAGTCAACGTTACAA
CAGAAGTAAAATCTGTCGAAATGCACCATGAAGCTTTGGGTGAAGCTCTTCCTGGGGACAGTGTGGGCTTCCATG
TCAAGAATGTGTCTGTCAAGGATGTTCGTCGTGGCAACGTTGCTGGTGACAGCAAAAATGACCCACCAATGGAAG
CAGCTGGCTTCACTGCTCAGGTGATTATCCTGAACCATCCAGGCCAAATAAAGCGCTGGCTATGCCCCTGTATTGG
ATTGCCACACGGCTCATATTGCATGCAAGTTTGCTGAGCTGAAGGAAAAAGATTGATCGCCGTTCTGGTAAAAAGC
TGGAAGATGGCCCTAAATTCTTGAAGTCCGGTGATGCTGCCATTGTTGATATGGTTCCTGGCAAGCCCATGTGTG

CTTTTTCACAACGGGTTTGCCGCCAGAACACAGGTGTCATGAAAACTACCCCTAAAAGCCAAAATGGGAAAGGAA
AAGACTCATATCAACATTGTCGTCATTGGACACGTAGATTCGGGCAAGTCCACCACTACTGGCCATCTGATCTAT
AAATGCAGTAGCATCGACAAAAGAACCATTGATATCTCCTTGTGGAAATTTGAGACCAGCAAGTACTATGTGACT
ATCACTGATGCTCCAGGACACAGAGACTTCATCAAAAACATGATTACAGGGACATCTCAGGCTGACTGTGCTGT
CCGATTGTTGCTGCTGGTGTTGGTGAATTTGAAGCTGGTATCTCTAAGAATGGGCAGACCCGAGAGCATGCCCTT
CTGGCTTACACACTGGGTGTGAAACAACTAATTGTTGGTGTTAACAAAATGGATTCCACTGAGCCACCCTACAGC
CAGAAGAGATATGAGGAAATTGTTAAGGAAGTCAGCACTTACATTAAGAAAATTGGCTACAACCCCGACACAGTA
GCATTTGTGCCAATTTCTGGTTGGAATGGTAACAACATGCTGGAGCCAAGTGCTAACATGCCTTGGTTCAAGGGA
TGGAAAGTCACCCGTAAGGATGGCAATGCCAGTGGAACCATGCTGCTTGAGGCTCTGGACTGCATCCTACCACCA
ACTCGTCCAACTGACAAGCCCTTGCGCCTGCCTCTCCAGGATGTCTACAAAATTGGTGGTATTGGTAGTGTTCCT
GTTGGCCGAGTGGAGACTGGTATTCTCAAACCCGGTATGGTGGTCACCTTTGCTCCAGTCAACGTTACAACAGAA
GTTGTGGGCCTCCCATGCAAGAATGTGTCTGTCAAAGGATGTTCGTCGTGGCAACCTTGCTGGTGACAGCAAAAAT
GACCCACCAATGGAAGCAGCTGGCTTCACTGCTCCAGGTGATTACCAACAATAA

TATAAATGCAGTAGCATCGACAAAAGAACCATTGAAAAATTTGAGAAGGAGACTGCTGAGATGGGAAAGGGCTCT
TTCAAGTATGGCTGGGTCTTGGATAAACTGAAAGCTGAGCGTGAACGTGGTATCACCATTGATATCTCCTTGTGG
AAATTTGAGACCAGCAAGTACTATGTGACTATCACTGATGCTCCAGGACACAGAGACTTCATCAAAAACATGATT
ACAGGGACATCTCAGGCTGACTGTGCTGTCCCGATTGTTGCTGCTGGTGTTGGTGAATTTGAAGCTGGTATCTCT
AAGAATGGGCAGACCCGAGAGCATGCCCTTCTGGCTTACACACTGGGTGTGAAACAACTAATTGTTGGTGTTAAC
AAAATGGATTCCACTGAGCCACCCTACAGCCAGAAGAGATATTGAGGAAATTGTTAAGGAAGTCAGCACTTACATT
AAGAAAATTGGCTACAACCCCGGACACAGTAGCATTTGTGCCAATTTCTGGTTGGAATGGTAACAACATGCTGGAG
CCAAGTGCTAACATGCCTTGGTTCAAGGGATGGAAAGTCACCCGTAAGGATGGCAATGCCAGTGGAACCATGCTG
CTTGAGGGCTCCAGTCAACGTTACAACAGAAGTAAAATCTGTCGAAATGCACCATGAAGCTTTTGGGTGAAGCTCT
TCCTGGGGGACAGTGTGGGCTTCCATGTCAAGAATGTGTCTCAAGGATGTTCGTCGTGGCAACGTTGCTGGTGAACCACGTTGCTGGTGAACCACCAATGGAAGCTTTCCTGGGTGAACCACCACGTTGCTGGTGAACCACGAAAAATGACCCCCCAATGGAAGCTGCTCCACTCCACGC

GTCGGCGTGTCGAGTGGCTCTTCCTGGCTGCTGAGGCGGGTTAAGGTCTGAGGGTCTTGTGGGGCCCACGGCGCTG ${\tt ATCACCAGGTGTTTGGCTTGGTCGGTTCTTATTTCTCGCCTGGCAATGGCGACGTACACCTGCATAACTTGCCGG}$ GTGGCGTTCCGCGACGCGGACATGCAGCGGGCCCACTATAAGACGGACTGGCACCGCTACAACCTGCGGCGGAAG GTGGCCAGCATGGCCCCAGTGACCGCCGAGGGCTTCCAGGAGCGAGTGCGGGCCGAGCGGGCCGTCGCGGAGGAG GAGAGCAAGGGCTCGGCCACCTACTGCACCGTTTGCAGTAAGAAGTTTGCCTCTTTCAACGCCTACGAGAACCAC GAAAAGAACTTGGAGAAAGGACTGGGCGTGGACAGTGTGGACAAGGATGCCATGAACGCGGCCATCCAGCAGGCC ATCAAGGCCCAGCCGTCCATGTCTCCCCAAGAAGGCCCCCCAGCGCCTGCAAAGGAGGCCAGGAATGTCGTGGCC GTGGGTACTGGTGGCCGTGGGACCCACGACCGAGACCCGAGTGAGAAACCACCCCGGCTCCAGTGGTTTGAACAG GAAGATATTGATTCTGATGAAGAATTGGAATGTGAGGATACTGAAGCAATGGACGATGTGGTGGAGCAGGATGCA GAGGAGGAAGAGGCTGAGGAAGGCCCACCCTTGGTGCCATCCCTATCACGGACTGCTTATTTTGTTCCCATCAT TCCAGCTCGCTGATGAAGAATGTGGCTCACATGACCAAAGACCACAGTTTCTTTATTCCTGATATAGAATATCTT TCAGATATTAAGGGACTGATTAAATACTTGGGAGAGAAAGTTGGTGTTGGCAAGATTTGCTTGTGGTGCAACGAG GACCCCAATAAGGCTGAGGAGTTGCCCTCAGAAAAGAACTTGGAATATGATGAAACCATGGAATTGATTCTG CCTTCTGGTGCCAGAGTGGGTCATCGCTCCTTGATGAGATACTACAAACAGCGATTTGGCTTGTCAAGAGCTGTG GCAGTTGCCAAAAATCGGAAGGCCGTGGGCCGAGTACTTCAGCAGTACAGAGCCCTGGGATGGACTGGCAGCACA GGAGCGGCTCTTATGCGAGAGCGAGACATGCAGTATGTCCAAAGGATGAAATCAAAATGGATGCTGAAGACAGGA ATGAAGAACAATGCCACCAAGCAGATGCACTTTCGGGTCCAAGTGAGATTCTGAGAGTCTGCTGGGATTGAGCAA TCATCTCCTGCCCAAGTTTCCTCCTTGCCCTGAGGACCAGTGAAAGACAGATCATAGGAGAGACCCTTTTGCTGC TACTTCATTCGTTCTGACCTAATAATAAAAGTTAGAACCAT

 ${\tt GAACTCCAAG} \underline{\textbf{ATG}} {\tt GGAGGCAAGCTCAGCAAGAAGAAGAAGAAGGGCTACAATGTGAACGACGAGAAAGCCAAGGAGAA}$ GAAGGACGCGGCGGCTGCCAAGGAGGAGGCCCCGAAGGCCGGAGAAGACGGAGGGCGCAGAGGCCAA TGCTGAGGCCGCCGCCGGCCGAGAGCGCGCCCCTGCCGCGGGGAGGAGCCCAGCAAGGAGGAAGGGA ACCCAAAAAGACTGAGGCGCCCGCAGCTCCTGCCGCCCAGGAGACCAAAAGTGACGGGGCCCCAGCTTCAGACTC CAAGGCCCAGGGCCCCGCAGCCTCTGCAGAAGAGCCCAAGCCGGTGGAGGCCCCGGCAGCTAATTCCGACCAAAC ACTAACTTGTTTCAAATTGGAAGTAATGATATGTATTGCCCAAGGAAAAATACAGGATGTTGTCCCATCAAGGGA GGGAGGGGGTGGGAGAATCCAAATAGTATTTTTGTGGGGAAATATCTAATATACCTTCAGTCAACTTTACCAAGA CTCCACCGCTGAGAGTTGAATAGCTTTTCTTCTGCAATGGGAGTTGGGAGTGATGCGTTTGATTCTGCCCACAGG CAATGCCAATCCTCCATTCTTCCTCCCAGATATTTTTGGGAGTGACAAACATTCTCTCATCCTACTTAGCCTAC $\tt CTAGATTTCTCATGACGAGTTAATGCATGTCCGTGGTTGGGTGCACCTGTAGTTCTGTTTATTGGTCAGTGGAAA$ TG

MGGKLSKKKKGYNVNDEKAKEKDKKAEGAATEEEGTPKESEPQAAAEPAEAKEGKEKPDQDAEGKAEEKEGEKDA AAAKEEAPKAEPEKTEGAAEAKAEPPKAPEQEQAAPGPAAGGEAPKAAEAAAAPAESAAPAAGEEPSKEEGEPKK TEAPAAPAAQETKSDGAPASDSKPGSSEAAPSSKETPAATEAPSSTPKAQGPAASAEEPKPVEAPAANSDQTVTV KE

 ${\tt MSYYFDRDDVALKNFAKYFLHQSHEEREHAEKLMKLQNQGGGRIFLQDIKKPDCDDWESGLNAMECALHLEKNVNQSLLELHKLATDKNDPHLCDFIETHYLNEQVKAIKELGDHMTNLCKMGAPESSLAEYLFDQHTLGDSDNES$

J

ATGCCCAAAACGATCAGTGTGCGTGTGACCACCATGGACGCAGAGCTGGAGTTTACCATCCAGCCCAACACCACC GCCAAGTTCTACCCTGAGGATGTGTCCGACCGAGGAATTGATTCAGGACACCACTCAGCGTCTGTTCCTTCTGCA ATGAAAGAGGGCATTCTCAGTGATGATATTTACTGCCGGCCTGAGACTGCTGTGCTGCTGCCCCATGCTGTC CAGTCTAAGTATGGGAACTTCAGTAAGGAGGTGCATAAGTCTGGCTACCTGGCCGGAGACGAGTTGCTCCCACAG AGAGTCCTGGAACAGCACAAACTCAGCAAGGACCAGTGGGAGGAGCGGATCCAGGTGTGGCATGAGGAACACCGT GGCATGCTCAGGGAGGATGCTGTCCTGGAGTATCTGAAGATTGCTCAAGATCTGGAGATGTATGGTGTAAACTAC TTCAGCATCAAGAAAAAGAAAGGCTCAGAGCTGTGGCTGGGGTGGATGCACTGGGTCTCAACATCTATGAGCAG GTCATCAAGCCCATTGACAAAAGAGCCCCGGACTTTGTCTTCTATGCTCCCTGGCTGCAGATTAACAAGCGGATC TTGGCCTTGTGCATGGGGAACCGTGAACTATACATGCGCCGTCGCAAGCCTGACACCATTGAGGTGCAGCAGATG AAGGCACGGGCCCGGGAGGAGGAGCACCAGAAGCAGATGGAGCGTGCTATGCTGGAAAATGAGAAGAAGCGTGAA ATGGCAGAAAAGCAGAAAGAAGATTGAACGGGAGAAGGAGCTGATGGGGAGGCTGAAGCAGATCGAGGAACAG ATGGAGTGGCAGCAGAAGGCCCAGATGGTACAGGAAGACTTGGAGAAGACCCGTGCTGAGCTGAAGACTGCCATG AGTACATCTCATGTGGCAGAGCCTGCTGAGAATGAGCAGGATGAGCAGGATGAGAATGGGGCCAGAGGCTAGTGCT GACCTACGGGCTGATGCTATGGCCAAGGACCGCAGTGAGGAGGAATGTACCACTGAGGCAGAGAAGAATGAGCGT GTGCAGAAGCACCTGAAGGCCCTCACTTCGGAGCTGGCCAGTGCCCGAGATGAGTCCAAGAAGACTGCCAATGAC ATGATCCATGCTGAGAACATGTGA

FIGURE 1562

ATGCCGCCCTCGCCTGCGTCCTGCGGCCGTCCCGAGGTGTCACGCTGTCAACAACACAAAGTCGTAGTTGACGTC
GACCATGAGCACTTAGCAGGAGGGCACGCACAGGGACTTGTGCCCGGCGGGGTCCAGCTCCTGCACCTTCAGCTG
CCACTCCATCCTCTGCACAGCGTTCAGGGCCGCAGCCTCGTGCTGCTGCCGCATGAGGAGGAAGAACTAGATGAA
CTTATGAGTGAAGAAGCCTATGAGAAATACATAAAATCTATTGAGGAG<u>TGA</u>

MPPSPASCGRPEVSRCQQHKVVVDVDHEHLAGGHAQGLVPGGVQLLHLQLPLHPLHSVQGRSLVLLPHEEEELDE LMSEEAYEKYIKSIEE